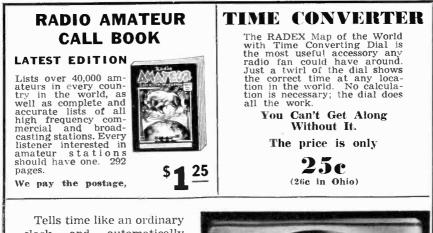




All the Broadcasting Stations with Names of Owners All the Police Broadcasters Choosing a Radio Set Amateur News

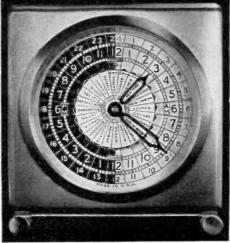


clock and automatically shows authentic time in every other zone around the world.

Actual size is 5<sup>1</sup>/<sub>4</sub> inches high by 4<sup>1</sup>/<sub>4</sub> inches wide.

Has A. M. and P. M. divided dial and 24-hour dial. 40-hour movement.

Just wind it and set it for the correct time. No further adjustment nor calculation is required.



Modernistic Design of Brushed Brass

What DXers Have Always Wished For! AN INTERNATIONAL CLOCK PRICE \$4.95 Order all these items from THE RADEX PRESS 14717 Detroit Ave., Cleveland, Ohio

## HERE'S WHY THE "Philharmonic" SETS NEW STANDARDS

1. Covers a Greater Wave Length Range. (3.75 to 2000 Meters),

2. Has Finer Tone and Higher Overall Fidelity. (From 30 to 16,000 Cycles),

3. Has a Smoother and More Highly Perfected Continuously Variable High Fidelity Range,

4. Has Sharper and More Complete Attenuation at 10,000 Gycles,

5. Has a Higher Degree of Selectivity, which is Continuously Variable from 2 to 16 Kc.,

6. Has More Perfect Automatic Gain Control Systems on both R.F. and I.F. Amplifiers,

7. Has More Usable Sensitivity,

8. Will Give Smoother and More Noise-Free Reception,

9. Has a More Highly Developed and Distortionless Program Volume Range Expansion System,

10. Will Give More Perfect Reproduction from Phonograph Recordings, Especially the Newest High Fidelity Records,

11. Will Eliminate Phonograph Needle Scratch at Low Volutives, Without Affecting Reproduction of Low, Mid, or High Frequencies in Any Way at Normal or High Volumes,

12. Is Custom Built with Greater Precision—And from Higher Quality Parts,

13. Has More Advanced Engineering Features Incorporated in Its Design,

MORE, WE BELIEVE. THAN ANY OTHER RADIO RECEIVER IN THE WORLD TODAY!



© 1937, SCOTT RADIO LAB., INC.

Super-Powered



# for Better FOREIGN Reception

The new SCOTT Custom-Built Philharmonic is, we believe, the world's most highly perfected long distance receiver. 30 Tubes, all operating at peak efficiency, develop tremendous controllable power. You can now tune many stations you have never heard before. Greater Sensitivity enables you to take a whisper from the far corners of the earth and amplify it to the volume of a "local". Greater Wave Length Range, 6 Bands, 3.57 to 2000 meters, gives you complete coverage of practically everything on the air. "Years ahead" in design . . . it will receive Television Sound Broadcasts. The secret of the new SCOTT Philharmonic's amazing performance lies in its 8 New Features (patents applied for), which permit you to locate and bring in those far away, weak, hard-to-get stations that are seldom heard on other receivers. \* The SCOTT PHILLIARMONIC is not an ordinary radio. It is Custom-Built hy hand to suit receiving conditions in your locality. Constructed with the precision of a fine watch. The Philharmonic is the only Radio Receiver, we believe, that will perfectly reproduce the entire tonal range of the human ear (30 to 16,000 cycles). Guaranteed 5 years. Fifteen beautiful cabinets. Scott Radios priced from \$234 to \$3000. Send for FREE details including LABORATORY CURVES.

#### E. H. SCOTT RADIO LABORATORIES, INC.

4424 Ravenswood Ave., Dept. 15P7, Chicago, U. S. A. Please send details about the new Scott Philharmonic. (No dealers. Sold only direct from Scott Laboratories. 30 DAY FREE TRIAL).

NAME

ADDRESS

SEE THE SCOTT AT STUDIOS IN CHICAGO • NEW YORK • LOS ANGELES

## SEPTEMBER 1, 1937





PAGE TAYLOR Editor

ASSOCIATE EDITORS B. FRANCIS DASHIELL, Technical CARLETON LORD, Broadcast

FOURTEENTH YEAR

NUMBER 111

#### CONTENTS

Cover Girl-Doris Wester, NBC's "Song Teller"

P	AGE
Choosing a Radio Receiver, by Carleton Lord	. 3
The Frequency Checks	. 9
DX Notes From the Broadcast Band, by the Broadcast Editor	. 13
Tuning the Amateurs, by B. L. Ahman, Jr.	. 16
Amateur Calls Heard	. 17
New Daventry Transmitters	. 18
Leaves From a DXer's Scrapbook, by Count de Veries	19
The Month's Changes in Station Data	24
What is a DX Club?	. 25
Our Readers' Radio Problems, by B. Francis Dashiell	. 27
UDXC Foreign Representatives Report	. 32
For the Shortwave Addicts	. 37
Gossiping About the Stars, by "Betty"	. 44

\$1.75 Per Year

25c Per Copy

See Subscription Blank on Page 96

Published Monthly Excepting July and August

#### THE RADEX PRESS

14717 Detroit Avenue - - Cleveland, Ohio Entered as second-class matter April 23, 1931, at the postoffice at Cleveland, Ohio, under the act of March 3, 1879.

Printed in U. S. A.

# CHOOSING a Radio Receiver

**OINCIDENTAL** with the appearance of a new radio season comes the introduction by manufacturers of their 1938 lines of receivers. And once again Mr. Average Listener attempts to decide whether the old model will do for another year.

If the verdict sends him to the nearest radio dealer, the prospective purchaser may well be in for a rather difficult time. More than ever before, the choice of a receiver will tax the wits of the shrewdest buyer. If he walks out of the store with the one model best suited for his own needs, the customer will have cause to congratulate himself.

Early inspections of the 1938 lines indicate that manufacturers are placing little stress upon the performance of their products. The ability of a receiver to provide satisfactory reception of local and distant stations apparently is taken for granted. In place of guarantees of foreign reception and high fidelity reproduction, the featured points include an impressive display of handsome cabinets, a wide variety of tricky new dials, and an incomprehensible assortment of gadgets made alluring by euphonic trade names.

After reading the advertisements and absorbing the output of glib salesmen, the customer will indeed be fortunate if he is able to remember the fundamental purpose of a good receiver.

#### Preliminary Steps

Before venturing into the market, the prospective purchaser would do well to analyze his own particular requirements and decide just what he will expect the new model to do for him.

#### • • • By CARLETON LORD

If he is a lover of fine music and insists on a high quality of reproduction, the customer should establish that fact in advance and keep it ever in mind. If he is afflicted with DX-ophobia, demanding extreme sensitivity and a high degree of selectivity, he will have something else to consider. If he merely wants a small set for occasional use in bedroom, den or office, he should remember that point.

Obviously, the "communications" type receiver, with accent on the r.f. and i.f. stages and with sufficient power to span the DX world, can hardly be expected to reproduce a symphony orchestra to the entire satisfaction of a skilled musician.



Alec Templeton, blind English pianist of the "Universal Rhythm" programs, is shown here presenting one of his amusing vocal impressions, that of a tenor singing Schubert's "Ave Maria" as heard by shortwave broadcast from Vienna. The Universal Rhythm programs are heard Sundays over the CBS from 8 to 9 pm EST.

Conversely, the broad-tuning set which will soothe the ear of the music lover, is seldom suitable for the demon DXer.

Frequently listeners insist on receivers which have potential DXgetting ability as well as high quality of reproduction. Many modern models will fulfill the expectations of the average customer in this respect, although the ideal combination is usually found in receivers in the higher price brackets.

But regardless of which quality or combination of qualities the purchaser desires, he should have a definite idea of what he is going to expect from his new set.

#### **Price Considerations**

The old adage that "you get just what you pay for" was never more true than in the radio industry today. Mass producers of receivers plan and design every model to retail in a certain price class. Since costs of manufacture and distribution run more or less constant for a product of given quality, it follows that the customer can expect just so much from a model in any price bracket.

Of course, some manufacturer may be able to make a better coil, condenser or resister than his competitors, while another may do a more careful job of assembling and aligning. The receivers so affected may show to advantage, and that is what the customer will be checking when he compares models selling at around the same price.

But for any purchaser to believe that, say, a fifty-dollar Whoozit is a better receiver than a seventydollar Whatzit, is simply placing too much faith in the line of the salesman. The Whoozit people designed their particular set to sell in the most popular of all price brackets and they may have done a very good job. It may be far superior

to the comparable Whatzit model which sells at the same price and it may entirely suit the needs of the customer, but it can hardly be expected to compete with a set retailing at twenty dollars more.

Unless the Whatzit people are looking for an early demise, they gave the purchaser something tangible for that extra twenty dollars. It may be another tube or two, a larger speaker, a better grade of component parts, or a finer cabinet.

In nine cases out of ten, that extra money would be spent for something additional in the way of performance, fredom from service troubles, or long life.

Consequently, before going to the nearest radio dealer, Mr. Average Listener should establish in his mind what price he can afford to pay for a receiver which will most nearly meet his requirements. He may find that it will be necessary to go a little higher to get just what he wants, but he should never drop to a lower price bracket without realizing that the set will be cheapened in some way.

#### Automatic Tuning

In every store exhibiting the 1938 lines, the customer will first be impressed by novel dials and tuning devices. Designers and engineers have gone to great ends to ease the strenuous task of tuning a handful of favorite stations, and listeners undoubtedly will be attracted by a multiplicity of gadgets.

A large number of receivers are featuring some version of the "automatic telephone" type of dial which was introduced last year. Basically, this is a most convenient aid to tuning. To bring in any one of a number of pre-selected stations, the listener merely places a finger in the slot indicated by the desired call letters and spins the dial to a designated position. When this arangement is properly designed, the dial will catch at a stop position. The gang condenser, which has been turned by a direct drive, will then be in a nearly-corect position for the wanted station. In a split-second, the *automatic frequency control* circuit brings the station into resonance and the tuning will have been completed, except for a posible adjustment of volume.

Unfortunately, many of the cheaper sets brazenly advertise automatic tuning, when actually they have no such thing. They have no stops to catch the dial at the proper position for each station and the swing is merely approximate. In some cases, it may vary ten kilocycles in either direction. Also there is no AFC circuit to bring the station into resonance, so the listener must then tune the station by hand in the usual manner. Customers should be on the look-out for this type of the so-called automatic dials.

#### **Push Button Tuning**

For listeners with feeble forefingers, engineers have relieved the strain of manual dialing through the installation in some models of small electric motors. When one of a number of buttons is pushed, the motor turns the dial and the receiver is automatically tuned to a desired station.

While this type of tuning may prove very popular, listeners should remember that every added gadget is a potential source of future trouble. The more motors, gears and devices that are added to an already-complicated mechanism, the more there is to get out of order and the greater the possibility of service work at a later date.

In one of the first receivers inspected, several little "bugs" were noticed. For example, should an inquisitive child inadvertently push more than one of the station buttons, the dial would turn crazily from one end to the other and back again. This would last indefinitely unless the motor was shut off. In the meantime, the regular tuning knob would be spining at a great rate. Seeing this and desiring to stop the movement, the youngster would be tempted to grab the control and hold on. In such a case, the fate of the entire mechanism would depend on whether the child let go before the motor gave out or the gears were stripped.

In the same receiver, the motor had a one-track mind. Suppose the set had been tuned to, say, 600 kcys and then moved to 650. Then push a button for a station on 550. The motor would continue in the same direction, turning the dial all the way up to the high frequency end before it reversed and travelled all the way back to 550.

Of all the receivers inspected which had push-button tuning, the Silvertone model 4788 had the most sensible mechanism. For any button pushed, the dial took the shortest path to the desired station and did not have to travel to either end before reversing. Should more than one button be pushed, the dial turns to the nearest station and then stops. During any of the automatic tuning operations, the regular tuning knob remains motionless.

#### Try Before You Buy

There should be no need to remind listeners that the display of a radio store is no place to demonstrate any receiver, yet thousands of customers sign on the dotted line solely as the result of what they have heard in an unfavorable location.

Few reputable dealers will refuse a request for a home demonstration. Consequently, the purchaser who ignores an opportunity to see how a set performs in his own home, can have no legitimate cause for complaint should it develop that the receiver was bought because of a smooth sales talk instead of on its own merits.

So when Mr. Average Listener has determined what he expects from a set and has decided what he can afford to pay for the receiver which most nearly meets his requirements, he should insist on an opportunity to try out the most logical selection in his own home for a few days. There he should give it a good workout, perhaps compare it with other models, and then decide whether it will be a good investment.

In this connection, it is interesting to note the points which are checked in the field by the engineers who develop the Silvertone models. Every receiver is operated under normal conditions in homes throughout the country and each model must pass a rigid examination before it goes into actual production.

When a set is unboxed and connected, the engineer first checks its He mechanical features. notes whether the dial operates smoothly and if there are any rough spots. If the dial is gear-driven, he checks to see if there is any backlash; if it is cable-driven, he looks for slipping. The other controls are also checked for rough spots. He notes whether the dial has sufficient illumination for easy reading and if the various knobs are well identified. Knowing that small children may have access to the receiver, he looks for possible troubles which may be caused by inquisitive fingers.

#### **Tune Favorite Stations**

When the power is turned on, the listener should first tune across the broadcast band, taking notice of how his favorite stations are received. On each identified station, he should check to see if the dial is accurately calibrated. If the receiver is equipped with automatic volume control, he should note whether the more powerful stations are heard at

an even level. Using maximum sensitivity, he should observe the "hiss and swish" level and see if it is objectionable.

While going over the broadcast band, the purchaser should notice if any stations appear at more than one point on the dial. Eliminating any slight inaccuracies in calibration, it should be determined whether there are any repeat points due to image frequency.

Selectivity should also be noted during the early tuning. Any receiver worthy of the name should be able to bring in favorite local and semi-distant stations without a trace of interference from other stations. If the purchaser goes in for an occasional bit of DXing, an even greater degree of selectivity will be necessary and then he should expect 10-kcy separation. If he is able to pull in a medium-power, semi-distant station on a channel adjacent to a 50-KW local, he really has something.

Next in line are tests for hum and internal noise level. By tuning to a point where no station is audible and turning the volume control all the way down, the purchaser can observe the degree of hum, if any. Then by disconnecting aerial and ground, and advancing the volume control, it is easy to note the amount of noise created in the receiver. Obviously, an excessive amount of hum or internal noise will be difficult for DX wofk

Turning next to a favorite local station, the purchaser should observe the quality of reproduction. If the receiver has a tone control, it should be set at various points and the quality observed. Turn the volume control all the way off and see if the station is still audible. If so, decide whether that is objectionable to you. Then increase the volume and note whether there is any overloading or distortion before adequate room volume is reached.

These observations should be re-

peated on other stations which are regularly dialed. If at any time there is a tendency for the set to develop any "motorboating" or if any microphonism is noticed, the dealer should be given an opportunity to correct the trouble.

As far as possible, the tuning operations should be repeated on the short wave bands. Calibration is particularly important here, where many stations are crowded into a relatively small section of the dial. A receiver which offers band spread or second hand tuning enjoys a decided advantage when it comes to separating and logging stations.

A balky dial will stand out like a sore thumb when dialing the high frequency transmitters. Two-speed tuning is a real help and, if this is not available, the single ratio should at least be high.

Listeners will have little difficulty in working out additional tests and observations for the receiver on trial. It isn't a bad idea to try out two or more receivers at the same time and under the same conditions, make notes on the particular phases in which each excels, and then choose the set which has the best all-around rating.

#### How Many Tubes?

The average listener has little or no conception of the functions of the tubes in his receiver. He has a vague idea that reception improves in direct proportion to the number of tubes in the set, so he really goes out to buy a box of tubes.

On the receiving end of an advertisement or a sales talk, the customer may be impressed by the claim that this seven-tube job, with three multi-purpose tubes, actually gives ten-tube performance. It is a little difficult to understand the basis for such a claim, since there is no scale by which tube performance can be measured.

Another frequently-used argument



Comedian Ken Murray and blonde Marlyn Stuart, the girl who made radio jame with two speaking lines ... "Mama, oh Mama, here's that junny man again." Ken Murray, Shirley Ross and Lud Gluskin are heard on the Campbell's program over the CBS on Wednesdays.

is that a particular twelve-tube set is a rare bargain at the price, merely because it has so many tubes. And here again the number of tubes does not necessarily mean that the receiver is to be recommended.

If the customer is going to base his decision on the number of tubes. he should consider their functions in the receiver. If he is looking for a sensitive and selective model. the tubes should be concentrated in the r.f. and i.f. stages. One of the most powerful superheterodynes made today has two tubes in the r.f., three in the i.f., two detectors, one oscillator, one rectifier, and two stages of a.f. amplification. That makes a total of eleven tubes, most of which are used for sensitivity

(Please turn to Page 43)

## Call Letter Jamboree

A fellow named WILL said to KOY little KATE, "Poor KRIS, bashful swain, wishes me to relate WHAT trouble he's had in expressing his love For you, pretty WREN, and WOOD like you to shove Aside all the others, and tell him you'll be His friend, good and true; you'll like none but he."

"No, sir!" said the *KID*, "but I'm *KEEN* for a whirl Around the old town; let's get *WARD* and his girl. He's got lots of *KOIN* and *WEED KAST* cares away While dancing together and seeing Broadway. I don't care for *KRIS*, but I want you to *KNOW* 'Tis you *WHOM* I like best and not that old *KROW*."

This turn in affairs took our WILL by surprise. He felt the dire need of some good alibis. For WORK he had none, and the clothes that he WORWere tattered and shabby, and his little store Of KALE had diminished to practically nil And he couldn't pay his own share of the bill.

6

Now WRUF to the KORE was this tramp from the WEST, But KAWM and quick thinking when put to the test. "WELL, KIDO, I'm willing, but I never thought That I was the one whose favor you sought," He said to the KUTA, but to himself KUSD, "This girl is a WOW, but to leave her I must."

"I look like a WREC," to the lady he spoke. "Excuse me a while; here's a cig you can CMOK. WAAT I need to do is get clean clothes to WAIR, Some WATR to WASH in and a KOAM for my hair. Just wait here and I WIL return right away." A WAVE of his hand and he left for the day.

"Oh WEAU is my lot," cried the girl so chagrined On learning her lover had gone with the WIND. "Now WHO WOOD have thought he'd do such a WRAW trick? I'd WHIP him—I'd brain him with a WROK or a brick. If I had him I'd KOIL him with high tension WIRE And turn on the juice and just let him expire."

Our hero is headed for the land of KOTNNot thinking at all about his trick so rotten. He *WRAX* his poor brain with thoughts of *KRIS*, his old pal, *WHO* told him that *KATE* was such a *KOY* little gal!

# The Frequency Checks

In order to include many of the new stations which have recently come on the air, the engineers of the Federal Communications Commission have revised their list of monthly frequency check broadcasts. The latest schedule, with times given in Eastern Standard, follows:

The Second Monday

		ie seco	ng menday
2:00-2:20	WLNH	1310	Laconia, N. H.
0.00.000	WJBO	1420	Baton Rouge, La.
2:10-2:30	WBRB	1210	Red Bank, N. J.
2:20-2:40	WHBB	1500	Selma, Ala.
2.20-2.40	WMAS	1420	Springfield, Mass.
2:30-2:50	WIOD WWRL	1300	Miami, Fla.
2.30-2.30	WJBW		Woodside, N. Y.
2:40-3:00	WOKO	1200 1430	New Orleans, La,
2.10-0.00	WMBR		Albany, N. Y.
2:50-3:10	WCAX	1200	Jacksonville, Fla. Burlington, Vt.
	WOPI	1500	Bristol, Tenn.
3:00-3:20	WMBO	1310	Auburn, N. Y.
	WMSD	1420	Sheffield, Ala.
3:10-3:30	WOC	1370	Davenport, Ia.
	WCAD	1220	Canton, N.Y.
	WMFN	1210	Grenada, Miss.
3:20-3:40	KWLC	1270	Decorah, Ia.
	WMBQ	1500	Brooklyn, N. Y. Memphis, Tenn.
3:30-3:50	WNBR	1430	Memphis, Tenn.
3.30-3.30	KFPW WMFF	1210	Fort Smith, Ark. Plattsburg, N. Y.
	WDBO	1310 580	Orlanda Ela
3:40-4:00	KABC	1420	Orlando, Fla. San Antonio, Tex.
	WQDM	1390	St. Albans, Vt.
	WSMB	1320	New Orleans, La.
3:50-4:10	WFAS	1210	White Plains, N. Y.
	WHEF	1500	Kosciusko, Miss.
* <b>4:00-4:2</b> 0	KFDM	560	Beaumont, Tex.
	KLS	1280	Oakland, Calif.
	WCAP	1280	Asbury Park, N. J.
4:10-4:30	WAGF KCRJ	1370 1310	Dothan, Ala.
1.00	KMLB	1200	Jerome, Ariz. Monroe, La.
	KYOS	1040	Merced, Calif.
4:20-4:40	KLUF	1370	Galveston, Tex.
	KGDM	1100	Stockton, Calif.
	WDEV	550	Waterbury, Vt.
	WDNC	1500	Waterbury, Vt. Durham, N. C.
4:30-4:50	KROC	1310	Rochester, Minn,
	KGAR	1370	Tucson, Ariz.
4:40-5:00	KALB KOVC	1210 1500	Alexandria, La.
1.10-0.00	KROY	1210	Valley City, N. D.
	WBNO	1200	Sacramento, Calif. New Orleans, La.
4:50-5:10	KEUB	1420	Price, Utah
	KRE	1370	Berkeley, Calif.
	WLAK	1310	Lakeland, Fla.
5:00-5:20	KBST	1500	Big Spring, Tex.
	KIEM	1450	Eureka, Calif.
5.10 5.00	WFOY	1210	St. Augustine, Fla.
5:10-5:30	KDON	1210	Del Monte, Calif.
	WMIN WTAL	1370	St. Paul, Minn.
5:20-5:40	KTRH	$1310 \\ 1290$	Tallahassee, Fla.
0.20 0.10	KUMA	1420	Houston, Texas
	WAIR	1250	Yuma, Ariz. Winston-Salem, N. C.
5:30-5:50	KFGQ	1370	Boone, Ia.
	KWG	1200	Stockton Calif
	WGCM	1210	Gulfnort Miss
5:40-6:00	KGMB	1320	Honolulu, T. H. Mason City, Ia.
5:50-6:10	KGLO	1210	Mason City, Ia.
6.00 6.90	KVCV	1200	Redding, Calif.
6:00-6:20	KHUB	1310	Watsonville, Calif.

#### The Second Tuesda

	Ť	ne Seca	nd Tuesday
2:00-2:20	WBAN		Wilkes Barre, Pa. Philadelphia, Pa.
2:10-2:20	WDAS	1370	Philadelphia, Pa.
2:20-2:40	WBBL	1210	Richmond, Va.
2:30-2:50 2:40-3:00	WFBG	1310	Altoona, Pa.
2:50-3:10	WMBC WEBR	1210	Richmond, Va. Buffalo, N. Y.
3:00-3:20	KDAL		Buffalo, N. Y. Duluth, Minn.
0.0070120	WLVA	1500	Duluth, Minn.
3:10-3:30	KPAC	1200 1260	Lynchburg, Va. Port Arthur, Tex.
0.10-0.50	WBTM		Danville, Va.
3:20-3:40	WKRC	550	Cincinneti Obio
	WHEC	1430	Cincinnati, Ohio Rochester, N. Y.
3:30-3:50	WNAD	1010	Norman Okia
	WMBC	1420	Norman, Okla. Detroit, Mich.
	WRAK	1370	Williamsport, Pa.
3:40-4:00	KFVS	1210	Cape Girardeau, Mo.
	WJAC	1310	Johnstown, Pa.
3:50-4:10	WTAW	1120	College Station, Tex.
	WBNS	1430	Columbus, Ohio
	WBNY	1370	Buffalo, N. Y.
4:00-4:20	WCOL	1210	Columbus, Ohio
	WBRE	1310	Wilkes Barre, Pa.
4:10-4:30	KLPM	1240	Minot, N. Dak.
	WPAR	1420	Parkersburg, W. Va.
	WPAY	1370	Portsmouth, Ohio
4:20-4:40	KRMD	1310	Shreveport, La.
	WOMT	1210	Manitowoc, Wis.
4:30-4:50	WSYR	570	Syracuse, N. Y. Decorah, Ia.
4:30-4:30	KGCA WJAY	$1270 \\ 610$	Decorah, Ia.
	WNBF	1500	Cieveland, Ohio Binghamton, N. N.
4:40-5:00	KTEM	1370	Binghamton, N. Y. Temple, Tex.
1.10 0.00	KGBU	900	Ketchikan, Alaska
	WGH	1310	Newport News, Va.
4:50-5:10	KGVO	1260	Missoula, Mont
	KRLH	1420	Missoula, Mont. Midland, Tex.
	WHK	1390	Cleveland, Ohio
	wwsw	1500	Pittsburgh, Pa.
5:00-5:20	KGCX	1450	Wolf Point, Mont.
	KRMC	1370	Jamestown, N. D.
	WSPD	1340	Toledo, Ohio Astoria, Ore.
5:10-5:30	KAST	1370	Astoria, Ore.
	KNET	1420	Palestine, Tex. Louisville, Ky. Kansas City, Mo.
5:20-5:40	WAVE KCMO	940	Louisville, Ky
0.20-0:40	KFJI	1370	Kansas City, Mo.
	WXYZ	$1210 \\ 1240$	Klamath Falls, Ore. Detroit, Mich.
5:30-5:50	KIDW	1420	Detroit, Mich. Lamar, Colo. Wenatchee, Wash.
0.00-0.00	KPQ	1500	Wenstehee Wash
	WGAR	1450	Wenatchee, Wash. Cleveland, Ohio
5:40-6:00	KFIO	1120	Spokane, Wash.
	KQV	1380	Pittsburgh Pa
	WCAT	1200	Pittsburgh, Pa. Rapid City, S. Dak. Carisbad, N. Mex.
5:50-6:10	KLAH	1210	Carisbad, N. Mex.
	KORE	1420	Eugene, Ore.
6:00-6:20	ROOS	1200	Marshfield, Ore.
	WLBL	900	Stevens Point, Wis.
	The	Second	Wednesday
2:00-2:20	WMFJ	1420	Daytona Beach, Fla.
2:10-2:30	WAIM	1200	Anderson S C
2:20-2:40	KVOL	1310	Lafavette, La.
2:30-2:50	WHBQ	1370	Memphis, Tenn.
2:40-3:00	WKAQ	1240	San Juan, P. R.
2:50-3:10	wsjs	1310	Lafayette, La. Memphis, Tenn. San Juan, P. R. Winston-Salem, N. C.
3:00-3:20	WCPO	1200	Cincinnati, Ohio
	WMFD	1370	Wilmington, N. C.
3:10-3:30	KFIZ	1420	Fond du Lac, Wis.
9.00 B.40	WPAX	1210	Thomasville, Ga.
3:20-3:40	WCLO	1200	Janesville, Wis.
2.20 2.50	WRDW	1500	Augusta, Ga.
3:30-3:50 3:40-4:00	WQBC KAND	1360	Vicksburg, Miss.
0.10-1:00	KAND KPLC	1310 1500	Augusta, Ga. Vicksburg, Miss. Corsicana, Texas Lake Charles, La.
_	WHBC	1200	Canton, Ohio
	KARK	890	Little Rock, Ark.
	WGPC	1420	Albany, Ga.
~			internet, Ga.

					KGU	750	Hopolulu T H
4:00-4:20	KFJZ	1370	Fort Worth, Tex.		W1BU	1210	Honolulu, T. H. Poynette, Wis.
	WHBU	1210	Anderson, Ind.	6.10-6:30	KGIW	1420	Alamosa, Colo.
	WJNO	1200	W. Palm Beach, Fla.	0.10-0.30	KHBC	1400	Hilo, T. H.
4:10-4:30	WBEO	1310 880	Marquette, Mich. Meridian, Miss.	6:20-6:40	KVEC	1200	San Luis Obispo, Calif.
-	WCOC	1250	Minneapolis, Minn.	0.20 0.10	WGL	1370	Fort Wayne, Ind.
4.90 4.40	KSO	1430	Des Moines, Ia.				d Friday
4:20-4:40	WOSU	570	Columbus, Ohio				
	WKEU	1500	Griffin, Ga.	2:00-2:20	WGNY	1210	Newburgh, N. Y. Brooklyn, N. Y.
4:30-4:50	WEXL	1310	Royal Oak, Mich.	2:10-2:30	WCNW	1500 1 <b>2</b> 10	Brooklyn, N 1.
4:30-1.00	WHLB	1370	Virginia, Minn.	2:20-2:40	WGBB	1210	Freeport, N. Y.
4:40-5:00	KPLT	1500	Paris, Tex.	2:30-2:50	WABY	1500	Albany, N. Y. Rutland, Vt.
4.40-0.00	WJMS	1420	Ironwood, Mich.	2:50-3:10 3:00-3:20	WSYB WABI	1200	Bangor, Me.
	WJRD	1200	Tuscaloosa, Ala.	3:20-3:40	WIBX	1200	Utica, N. Y.
4:50-5:10	KFXR	1310	Oklahoma City, Okla.	3:30-3:50	KASA	1210	Elk Clty, Okla
	WTAX	1210	Springfield, Ill.	3.30-3.00	WAGM		Presque Isle, Me.
	WBIG	1440	Greensboro, N. C.	3:40-4:00	KWOS	1310	Jefferson City, Mo.
<b>5:</b> ∪0-5:20	KFJB	1200	Marshalltown, Ia.	0.10-1.00	WNBZ	1290	Saranac Lake, N. Y.
	WEOA	1370	Evansville, Ind.	3:50-4:10	WJBK	1500	Detroit, Mich.
5:10-5:30	KPDN	1310	Pampa, Tex.	0.00 1.10	WMBH	1420	Joplin, Mo
	WDZ	1020	Tuscola, Ill.		WRDO	1370	Augusta, Me.
5:20-5:40	KELD	1370	Eldorado, Ark.	4:00-4:20	KIUL	1210	Garden City Kans
	WAYX	1200	Waycross, Ga.		WTHT	1200	Hartford, Conn.
	WKBN	570	Youngstown, Ohlo	4:10-4:30	KICA	1370	Clovis, N. M.
5:30-5:50	KDLR	1210	Devils Lake, N. D.		WCAZ	1070	Carthage, Ill.
	WADC	1320	Akron, Ohio		WNLC	1500	New London, Conn.
5:40-6:00	KRBC	1420	Abliene, rex.	4:20-4:40	WMFG	1210	Hibbing, Minn.
	WSAU	1370	Abilene, Tex. Wausau, Wis. Dublin, Texas	4:30-4:50	KIUP	1370	Durango, Colo.
5:50-6:10	KFPL	1310	South Bond Ind		WPAD	1420	Paducah, Ky.
0.00 0.00	WFAM	$\frac{1200}{1290}$	South Bend, Ind. Blytheville, Ark.	4:40-5:00	KNOW	1500	Austin, Tex.
6:00-6:20	KLCN WELL	1420	Battle Creek, Mich.		WEMP	1310	Milwaukee, Wis.
0.10.0.00		1230	Springfield, Mo.	4:50-5:10	WEW	760	St. Louis, Mo.
6:10-6:30	KGBX WMPC	1200	Lapeer, Mich.		WGRC	1370	New Albany, Ind.
6:20-6:40	KABR	1420	Aberdeen, S. D.	5:00-5:20	KIUN	1420	Pecos, Tex.
	KADA	1200	Grand Junction, Colo.		WEBQ	1210	Harrisburg, Ill.
6:30-6:50				5:10-5:30	KGEK	1200	Sterling, Colo.
	The		d Thursday		WCMI	1310	Ashland, Ky.
2:00-2:20	wsvs	1370	Buffalo, N. Y.	5:20-5:40	KMAC	1370	San Antonio, Tex.
2:10-2:30	W.KOK	1210	Sunbury, Pa. Reading, Pa.		WJW	$1210 \\ 1200$	Akron, Ohio
2:20-2:40	WRAW		Reading, Pa.	5:30-5:50	WIL		St. Louis, Mo.
2:30-2:50	WJTN	1210	Jamestown, N. Y.		WLBC	$1310 \\ 1370$	Muncie, Ind. Oklahoma City, Okla
2:40-3:00	WTEL	1310	Philadelphia, Pa.	5:40-6:00	KTOK WKBB	1500	E. Dubuque, Ill.
2:50-3:10	WH18	1410	Bluefield, W. Va. Scranton, Pa.	F . FO 0.10		1210	Wichita, Kans.
3:00-3:20	WQAN	880	Scranton, Pa.	5:50-6:10	KANS WHBY	1210	Green Bay, Wisi
3:10-3:30	WLEU	1420	Erie, Pa.	6:00-6:20		1420	Waco, Tex.
3:20-3:40	WBLK		Clarksburg, W. Va.			1200	Decatur III. No.
3:30-3:50	WSAJ	1310	Grove City, Pa.	6:10-6:30 6:20-6:40		1310	Santa Fe, N. M. Calumet, Mich.
3:40-4:00		1200 1210	Bloomington, Ill. Rochester, N. Y.	0.20-0.30	WHDF	1370	Calumet, Mich.
	WSAY		Philadelphia, Pa.	6:30-6:50		1200	Fergus Falls, Minn.
3:50-4:10		1310 1420	Levington Ky	0.00 0.00			1
4.00 4.00	WLAP		Lexington, Ky. Olean, N. Y.		Th	e Secor	nd Saturday
4:00-4:20	WHDL		Dayton, Ohio	2:00-2:20	WMFR	1200	High Point, N. C.
4.10 4.20			Gallup, N. M.	2:10-2:30			Decatur, Ala.
4:10-4:30		1210	Lansing, Mich.	2:20-2:40		1210	Charlotte, N. C.
4:20-4:40	WJIM WBBZ	1210	Ponca City, Okia.	2:30-2:50	WTJS	1310	Jackson, Tenn.
4.20-1.40	WBOW		Terre Haute. Ind.	2:40-3:00	WSIX	1210	Nashville, Tenn.
4:30-4:50		1370	San Angelo, Tex.	2:50-3:10	WROL		Knoxville, Tenn.
1.00-1.00	WCBS	1420	Springfield, Ill.	3:00-3:20	) KOTN	1500	Pine Bluff, Ark.
4:40-5:00			Sherman, Tex.		WBLY		Lima, Ohio
2.20 0.00	WTMV		East St. Louis, Ill.		WQAM	560	Miami, Fla.
4:50-5:10			Albuquerque, N. M.	3:10-3:30	KWY0		Sheridan, Wyo.
	WHBF	1210	Rock Island, Ill.		WPRP	3420	Ponce, P. R.
5:00-5:20		1370	Bakersfield, Call.	3:20-3:40			Mandan, N. Dak.
	KGKO	570	Wichita Falls, Tex.		WNEL		San Juan, P. R.
	WTRC			3:30-3:50	) KXYZ		Houston, Tex. Laurel, Miss.
5:10-5:30	) KGFI	15(0)	Corpus Christi, Tex.		WAMI WKBV		
	KTRB		Modesto, Cant.	0.40.4.00		1260	Weslaco, Tex.
	WWAE			3:40-4:00	WFOR	1370	
5:20-5:40			Lubbock, Tex.	9.20 1.10			Brady, Tex.
	KJBS	1070		3:50-4:10	WEEL	10.00	
	WIBM		Jackson, Mich.		WGBF		
5:30-5:50		1200	Little Rock, Ark.	4:00-4:20		1210	
	KXO	1500		±.00-±.20	WFDF		Filnt, Mich.
F.40 0 0	WALR	1210 1320			WFTC	1200	Kinston, N. C.
5:40-6:00	) KGHF			4:10-4:30			Anchorage, Alaska
	KHSL		Champaign, Ill.		KONO		San Antonio, Tex.
5:50-6:10	WDWS KGKB				WKBZ	1500	Muskegon Mich
5:50-6:10	KSUN		Lowell, Ariz.	4:20-4:40		1390	Lewiston, Idaho
	WBCM				KTSM	1310	El Paso, Tex.
6:00-6:20					WBHF	1200	Huntsville, Ala.
0.00-0.20		1070					

4:30-4:50	KOCA	1210	Kilgore, Tex.
	KUJ	1370	Walla Walla, Wash.
4:40-5:00	KCMC	1420	Texarkana, Texas
	KRNR	1500	Roseburg, Ore.
4:50-5:10	KEEN	1370	Seattle, Wash.
	KWTN	1210	Watertown, S. Dak,
5:00-5:20	KGFF	1420	Shawnee, Okla.
	KIT	1310	Yakima, Wash,
5:10-5:30	KBTM	1200	Paragould, Ark.
	KRKO	1370	Everett, Wash.
5:20-5:40	KFRO	1370	Longview, Tex.
	KGEZ	1310	Kalispel, Mont.
5:30-5:50	KBIX	1500	Muskogee, Okla.
	KEXD	1200	Nampa, Idaho
5:40-6:00	KFJM	1410	Grand Forks, N. D.
	KXRO	1310	Aberdeen, Wash,
5:50-6:10	KGY	1210	Olympia, Wash.
6:00-6:20	KINY		Juneau, Alaska
6:10-6:30	KMED	1410	Medford, Ore,
5			Meanora, oro.

### Postage Rates

The rate of postage on letters is 3c for each ounce and for post cards, 2c each, to the following countries:

Annobon Island, Argentina, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Fernando Po, Guatemala, Haiti, Honduras, Mexico, Newfoundland, Nicaragua, Paraguay, Peru, Spain, Spanish Guinea, Spanish Morocco, Uruguay and Venezuela.

Alaska, Canal Zone, Hawaii, Puerto Rico and the Virgin Islands, being parts of the United States, take the same rates as letters in the USA, 3c for each ounce for letters, and 1c for post cards.

The postal rate to all the other countries in the world is 5c for each ounce and 3c for each additional ounce for letters, and 3c each for postcards.

The new Greenville, Texas station on 1200 kcs. replaces KFPM, the famous little 50 watter that left the air several years ago. KFPM recently tried a comeback and their request for reinstatement has been pending before the District of Columbia Court of Appeals. With the CP going to the Hunt Broadcasting Co., the application of KFPM was denied.

## Universal DX Club Corner

• • By "Pooky"



**R** EMEMBER last season's RADEX Mystery DX Contest? Remember RADEX offered a special prize to DX Clubs? To the DX Club with the highest percentage of members entered in the contest they'd give space in RADEX each month for ten months, said space to be used pretty much as the club saw fit.

Well, here we are, and we'll be here for nine months more. It's not a very comfortable feeling this first time. We feel rather naked, coming out in the open, on the newsstands with such magazines as Film Fun and Coronet. We do not know quite how to act.

The obvious thing to do would be to use this space every month to publicize UDXC activities, to tell the world what the UDXC is doing and how much better the UDXC is doing it. Probably no one but UDXC members would read the column if we did that, and we have already received and spent their dues. No, we are either too altruistic or too clever to use this space to talk about ourselves.

We (and by "We" you must always understand "Pooky," the Club mascot who cannot be sued) have evolved a contest. A mysterious contest. It seems fair to pay RADEX back.

A contest which is open to everyone, regardless of club affiliation. It requires no expert knowledge of DX. A child of four can win. And we do not want you to send in a single bottle cap unless it's attached to the bottle.

For the best eight articles on any phase of DXing sent to us during the next eight months, we (still "Pooky") will give the following eight prizes:

- 1. Graf Zeppelin cover, first U. S. flight, 1929, perfect condition, German Zep stamp.
- 2. One desk pad, 1938, deluxe model (you furnish the desk).
- 3. One typist's kit: Star type cleaner, micrometer carbon paper, patent stamp moistener, old tooth brush.
- 4. Twelve white Rose of Sharon, rare shrub, sturdy two-year-old stock.
- 5. Shhh! One large color photograph, guaranteed highly desirable, *No Details*.
- 6. One trial membership in the UDXC, six months, all privileges.
- 7. Twenty-five Indian Head pennies, assorted years, superb, guaranteed by the U. S. government.
- 8. One Philco doublet aerial, used, perfect condition, complete.

#### Selection of Prizes

One winning article will be published in this space each month with the name of the writer and his club affiliation. The prize he has selected will be sent him postpaid. When submitting entries it will be necessary to name your first three choices for prizes, and to name those which you especially *do not want*.

What can you write about? Anything! How you became a DXer. A visit to a broadcasting station. The technical side of aerials. Grounds. The sunspot theory. What you think of all-nighters. What's wrong with DX Clubs. Shortwave reception in Omsk.

The articles we select will be seri-

ous, informative, interesting DX articles. We mean that. Remember, Baron "Pooky" makes all the jokes. In length they may run anywhere from 200 to 1000 words. We specifically reserve the right to abbreviate them. None will be returned. No correspondence will be entered into.

Come on, DXers! We are willing to share our publicity with you. It's all in fun, and that photograph is ah! Address us, "Pooky," Universal DX Club Headquarters, 345 Maple Ave., Oradell, N. J. We really mean to give away those prizes because it is worth that much to Pooky to have someone write his column for him every month.

Speaking of publicity, why don't you join the club? Dues, you know, are only a dollar a year. And you get a mascot free.



A candid camera shot of lovely Jane Froman as she sings a love sonnet over the NBC-Red Network. She is the star of the program replacing the Jack Benny Show for the summer.

WTFI Athens, Ga., on 1450 kcs. will move into the city of Atlanta at about the time this issue of RADEX reaches its readers. It is expected the call letters will be changed to WAGA when the transfer is made.

# DX NOTES From The Broadcast Band

A FTER several months of inactivity, the calendar once more shows the approach of another radio season. For many a listener, this will mean dusting off the old receiver, removing the headphones from the proverbial moth balls, and generally getting ready for a winter of old-fashioned DXing.

It won't be long before many of our readers will be shutting off alarm clocks and crawling out of warm beds for an hour or two of early-morning dialing. As ever they will be on the look-out for new stations to verify, and judging from the way the FCC has been handing out construction permits, there are going to be a lot of swell catches waiting for a chance to be logged.

Radio clubs are already preparing for another season of activity and service to their members. In another section of this issue, which is dedicated to the Universal DX Club, an anonymous writer takes us behind the scenes of the UDXC headquarters at Oradell, N. J. Many of us who have never seen a club bulletin "put to bed," will be interested in the typical scene in the basement of 345 Maple Street. Those who have commented on the excellent typographical work done on that bulletin, will be glad to know how it is done.

#### Veri Cards vs. Letters

In many a past issue, readers have complained about stations which ask for three cents postage and then verify with a penny post card. While it has always been admitted that a neatly-typed, personal letter on a station letterhead is a most welcome addition to a file of verifications, readers may not have realized what it costs to verify in

#### • • By the BROADCAST EDITOR



Clem McCarthy, veteran NBC turf authority and commentator, and expert sports announcer, is shown in this interesting study.

that manner. Paul Sampson, 1820 College Ave., Regina, Sask., submits some revealing figures in this connection:

"Why do some DXers go up in the air because a station may send them a typewritten veri on a postal card?" he queries. "We really ought to thank our lucky stars that they do us this service. There are few stations which won't verify for return postage, but that is no reason to frown on them and put them down as robbers.

"After all, a radio station is a business enterprise just the same as the average office. They have to pay for their overhead and count the cost of operating their office. According to 'Office Practice,' the leading text of Canadian business high schools and colleges, here is what it costs the average office to send a letter: Executive's service, 15.4 cents; Stenographer's service, 7.3 cents; office overhead, 7.5 cents; Postage, 3.0 cents; and Stationary, 1.8 cents. Add that up and you find that the average letter costs exactly 35 cents to mail.

"It can be seen that the mere item of return postage doesn't begin to pay for the actual cost of issuing a veri. DXers should think twice before attacking the station which sends a post card or refuses to verify at all."

#### **Contest Winners Report**

It has been some time since the Mystery DX Contest was concluded and the various prizes distributed, but the intervening summer months have prevented the publication of letters from some of the winners. "The Scott 23-tube receiver ar-

rived the other day," advises Floyd L. Biss, Brittmount, Minn., who placed first. "I bought a Warrington console to go with the set and it is certainly a beautiful outfit. Haven't had a chance to operate it yet, since there is no AC current out this way. We have had an AC generating plant on order since last fall. but have suspended the order temporarily as we expect a power line to go through here. If the line doesn't come through pretty soon, however, we are going to get the other outfit. I'll be sure to have something figured out before the next DX season begins.

"Perhaps the most enjoyment a person can get out of a contest is coming in first, but I can honestly say that no other contest has ever held the interest for me that this one did. I thoroughly enjoyed the three nights of competition, and though I was sure that I had placed way down the line, I looked forward eagerly for the next competition. To learn that I placed first was a shock beyond measure."

"Just received the pair of head-

phones," writes Arthur E. Foerster, 1213 Bosart Ave., Indianapolis, Ind., "and want to thank you for giving me the opportunity to win them. Believe me, I wouldn't have minded so much the noise and static during the contest if the old set of phones hadn't been so heavy and made my ears so sore. The new Trimm Featherweights are swell and they sure make DXing more of a pleasure."

"The Perfect Phone Adapter was received OK," informs T. J. Sanders, P. O. Box 32, Bly, Ore., "and I want to thank you very much. Also, I want to join in with the many DXers in thanking you for putting on the contest, and I hope that you can repeat it each year."

"Just a line to thank you for the subscription to RADEX," notes P. M. Dillingham, Box 76, Luseland, Sask. "I really didn't think I had a chance to win one of the prizes, so the announcement in the May issue was a great surprise. The contest certainly was a thriller and you may be sure that I'll take a crack at any more you decide to conduct."

#### And A Non-Winner

"While I didn't get to first base in the contest," admits S. Raymond Lewis, 1733 Kensington Rd., Toledo, Ohio, grand prize winner in the 1936 competition, "I do want to congratulate Floyd Biss on the swell bit of dialing which he did over that memorable week-end. Knowing how reception was here in Toledo, and how it must have been all over the country, my hat is off to him and the rest of the winners. They certainly had what it takes!

"Outside of drawing a blank in the contest, the past season was unusually kind to me. The Scott really went to town and brought in the following trans-Atlantic catches: Belfast, Northern Ireland; Paris (on 695), Nice and Toulouse (on 776), France; Bologna (which makes Italy completely verified on the BCB); Vienna, Austria; Praha and Moravska, Czechoslovakia; Brussels No. 1, Belgium; Monte Ceneri and Beromunster, Switzerland; Breslau, Berlin, Leipzig and Konigsberg, Germany; and Madona, Latvia. PRA9 and PRE8 are two nice SA's which have come in recently. By adding a few Cubans, Canadians and Mexicans, and close to 40 U. S. stations, the total of veris has reached 1135. Some chaps say it was a bum season, but I don't see how it could have been much better for me."

#### **Reception Reports**

In one of Count De Veries' "Scrapbook" articles a couple of issues back, there was noted the case of five listeners in a mid-western city whose reports on KVI's contest program did not agree on the type of reception which was experienced. One listener reported static as being "heavy," while another said there was "none." Signal strength varied from R3 to R7. Other discrepancies were noted and it was pointed out that such a variance might look rather odd to the station engineers.

"I'll have to differ with you on the matter," informs Arthur E. Foerster, 1213 Bosart Ave., Indianapolis, Ind. "Can you imagine a situation something like this: a fine sensitive receiver, with an antenna directed toward KVI, on one side of the room; a cheap, noisy receiver, with antenna pointed away from KVI, on the other side of the room. I'd like to bet that the reception reports of the two DXers would be quite different. If the receiver, type antenna and direction didn't of make considerable difference in quality of reception, why would DXers be asked to give this information with their reports?"

"Put me down as disagreeing on the KVI matter," requests R. B. Oxrieder, 122 E. Hamilton Ave., State College, Pa. "Heaven only knows that DXers do plenty of things for which they deserve a 'cussing' but in this instance I am going to arise to the defense of the five mid-Western listeners.

"Not so long ago I was testing three receivers in a side-by-side test. On one particular station, receiver A was very selective and separated the desired station from interfering broadcasters on the two adjacent channels. I was able to hear about 90% of what was said, and gave the station QSA5-minus on readability. Receiver B failed to get rid of the interfering stations, so the wanted transmitter rated GSAO through no fault of its own. Receiver C was sufficiently selective to give about 70 to 80 per cent readability, so its reception of the station was rated QSA4.

"I have three aerials and a switching system, so I can use any one of them at will. Taking one receiver and tuning to a given station, I have found that antenna X will give satisfactory reception with the volume one-third on. Switching to antenna Y, I must turn the volume onehalf on before I get the same output. Finally, still tuned to the same station, use of antenna Z necessitates turning the volume two-thirds on to maintain the same level. Therefore, if I had been three different people, each one of whom had used one of these combinations, I couldn't have given the same R report in any case.

"At the time I made the threereceiver test, I found that on weaker signals: A gave very little noise; B gave some; C gave a lot. I have also found that the antenna used will make quite a difference in the case of the amount of noise picked up. Thus, a very honest report based on various combinations of aerials and receivers could easily show a wide variation on noise level and static.

"Consequently, if I can get so (Please turn to Page 48)

## Tuning The AMATEURS

#### • • • By B. L. Ahman, Jr.

**G**REETINGS, readers old and new. A fresh piece of news of interest to all of you is the Guatemalan amateur on 20 meters. He is TG1AX, and according to Julius Orosz he is on the low end of the band. The address hasn't been established as yet, but we'll try to have it for you next month. Frequency, 14100 kcs.

The frequencies of some new stations are given herewith: YI2BA, Iraq, Asia, on 14170 kcs. OZ7KE, Denmark, 14100 kcs. LU9KA, Ricardo Frias (h), 9 de Julio 197, Tucuman, Argentina, 14400 kcs. CP1AA, H. E. J. Smith, Casilla 669, La Paz, Bolivia, 14000 kcs. J2LU, Japan, 14265 kcs.

A nice card arrived from HC1JB, the portable call of HCJB, Quito, Ecuador. This was our first Ecuadorean ham, and the card is the same as the one used by the brother broadcasting station with the number "1" inserted.

Julius Orosz, 12205 Parkhill, Cleveland, Ohio, devotes his time entirely to tuning the 20-meter amateur band. He says he had tried all the other forms of DXing, but decided to concentrate on the amateurs because he feels that broadcast listening is too "cut and dried."

"For instance, on the broadcast band," he explains, "the frequencies and time on the air of practically all stations are available. Therefore, in order to tune in a certain station which you may be desirous of hearing, it is only necessary to tune at a predetermined time to a predetermined frequency, which can be very accurately accomplished on most receivers, and then turn up the yolume control. The result will be

that you will either hear the station or you wont and that's all there is to it.

"Thrills galore are available on the 20-meter band. Nothing is probable and yet anything is possible. This is a band of uncertainties and unlimited possibilities. Practically every country in the world has stations. Stations are amateur often heard from some country which we didn't know existed before, and many times flea-powered stations completely dominate the band. On this band one can fish to his heart's content.

"The beauty of amateur DXing is, regardless if the station is in Greece, Austria, Switzerland, Bolivia, Egypt or any other country, the calls are announced in English, with the use of proper nouns to facilitate identification of call letters. Some of these identifying signals themselves famous, such as have become W4DLH (Four dark lean horses), TI2KP (Kiss papa), W8TY (Thank you), W9PGC (Pretty Good City); W4EJA (Educated Jumping Alliga-W9ODQ (Old Doctor tors); or Quack).

"It is possible to build an impressive log even though time is limited as it takes only a few minutes to identify a new station. Many times within a period of five minutes several valuable additions can be made to one's log, while fifteen or thirty minutes or even more is required to identify a broadcasting station.

"I clearly recall the thrill I received one morning when I tuned in an Alaskan, K7PQ, with an R5 carrier squeezing between two powerful W6's. What was more grand than the thrill of hearing ZE1JR and ZU6P calling CQ, located in Southern Rhodesia and the Union of South Africa respectively? Most thrilling was the first reception of E12J in Dublin in the Irish Free State when the operator announced he was using only 7 watts. Nothing can equal the fun of tuning in 10 and 15 watt Australians, and nothing was more astonishing than the reception of VQ1AB in the Fanning Islands, when he announced that he had just reduced his power from 10 watts to ONE WATT."

Mr. Orosz has what we consider a very good system of keeping his amateur log. Space limitation forbids publication of this part of his letter this month, but in next month's column we will give the plan in detail.

"Twenty meter DX is still holding up well here," reports H. Wilcox, 623 W. 40th Place, Los Angeles, Calif. "The 1's, 2's, 3's and 4's are more active than usual and the 5's and 9's have let down somewhat. Canadians are always good here. Some of the best heard here last month are TI2KP ("Kiss Papa"), San Jose, Costa Rica: VE4KZ: VE3NF: TI2PG: XE1GK and K7FBE.

"One of the nicest cards received recently is the one from HH2B, Port-au-Prince, Haiti, showing a photo of the rig, which happens to be a 100 watt Collins. Other nice cards are from XE2FC, Tampico, Tams. and VE4KZ at Calgary."

September should bring a new crop of Australian hams to the fore, as DX on 20 has been pretty good throughout the year. Other countries, however, are beginning to make appearances and many new countries are being represented by amateurs. Modern receivers are going after and digging out those elusive far-away signals so easily now that one can sit at ease and travel around the world. The whole world is at our finger tips; all we have to  $d_{\vartheta}$  is listen in on what the other half is doing.

Readers are again cautioned to

send the longest reports possible to amateurs, with as accurate a description of the signals as is possible. The hams would rather have a poor report if correct than a glowing one which sounds too much like a bribe.

Do not be backward in sending in reports. They are all very much appreciated, and all will be used. Just let us know what you want and we shall do our best to please.

## Amateur CALLS HEARD

С

- C0: 2EG (ag); 2GA (g); 2JG (g); 2KC (dg); 2KY (gh); 2LY (g); 2MH (dg); 2RW (g); 2WW (gi); 2WZ (dg); 6OM (d); 7CX (i); 7HF (d); 8AG (g;) 8AK (g); 8BC (d); 8OG (g); 8YB (gi); CT1AY (g); CY1FR (c); EA8AE (c); EA9AH (g); EI2J (b); EI2L (g); F3GR (g); F8DL (c).
- G: G2HQ(g); 2MF(g); 5BJ(c); 5JO(a); 5KH(g); 5LV(g); 5ML(g); 5MU(g); 5LV(g); 5ML(g); 5MU(g); 5NI(g); 5NW(c); 5SA(g); 6BW(g); 6JQ(g); 6OS(g); 6TZ(g); 6WX(g); (g); 6XR(g).
  - H
- HB: 9A (g); 9B (g); 9J(g): HC1ETC (c);HC1FG (q): HH2B (cg); H15X (ag); H17G (agi); HK1GK (a); HK1JN (gi); HK3JA (g); HK3OC (i); HK4AG (g); HP1A (g); HR2A (e). K
- K: 4DFD (d); 4ENY (g); 4SA (gi); 6AJA (h); 6BNR (g); 6CMC (cg); 6JLV (a); 6LTV (d); 6MV (i); 6MYM (h); 6NTV (a); 6NZQ (cgh); 6OQE (dg); 7FST (h).

L LU1CA (g); LU1JE (g); LU5CZ (g); LU7AC (g); NY2AE (di); OA4AL (g); OA4C (h); OA4N (cg); OA4R (g); ON4PA (g); ON4VK (g); OQ5AA (g); PK1MX (e); PY1CK (c); PY2ET (c); PY1FR (g); PY2AK (g); PY2ET (g); SM7YA (g).

T TG1AX (e); TI1AF (g); TI2DC (a); TI2FG (i); TI2KP (ghi); TI2LR (g); TI2PG (g); TI2RC (gi); TI3AV (a).

- VE: VE1LR (hi); 2DC (i); 2ED (a) 2EV (a); 2FO (a); 2GG (a); 2HG (a); 2HY (a); 2LQ (i); 2NI (i); 2OQ (i); 3ADO (i); 3ADP (i); 3AKT (a); 3DF (d); 3FA (i); 3HB (i); 3QZ (i); 3TC (i); 4AC (c); 4ACR (i); 4BD (ci); 4FW (d); 4HU (d); 4IW (d); 4PM (c); 4TW (i); 5DK (a); 5EF (ci); 5OO (c); 5PE (d); 5PZ (d).
- VK: 2GU (d); 2HF (ch); 3KR (fg); 7CL (e); VO11 (ag); VO2N (ag); VP3GB (g); VP4TH (c); VP5AF (g); VP5GM (g); VP5PZ (h); VP6YB (cg); VP7NA (g); VP9F (c); VP9R (ag). W
- W: 5CHU, 5CTC, 5FDE, 6BPM, 6EJC, 6LR, 6LMS, 6DZX, 6BUQ, 6KSO (all heard by *i*). X-Y

XE1AK (i); XE1BC (g) XE1GK (g); XE1Y (g); XE2AH (g);XE2FF (h);VE2FC (gh); (g);(gh);XE2XE XE2JK XE3AH (g);XE3AG (g);YV1AA (qi): XE3BH (g);YV1AP (a); YV5AE (c); YV5AG (g).

Names and Addresses.

- (a). A. E. Blick, 125 Lappin Ave., Toronto, Ont.
- (b). Raphael Geller, 1652 Radcliff Ave., Bronx, N. Y.
- (c). George Nahas, 147 Seeley St., Brooklyn, N. Y.
- (d). Martin J. Olthoff, 212 N. 16th St., Independence, Kans.
- (e). Julius Orosz, 12205 Parkhill Ave., Cleveland, Ohio.
- (f). C. Schafranek, 61-47 69th St., Maspeth, N. Y.

## New DAVENTRY Transmitters

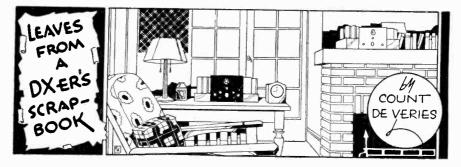
Details of the three new highpowered transmitters at Daventry and the reorganization of the aerial system have been announced by Sir Noel Ashbridge, the BBC's Controller of Engineering.

Sir Noel said that each of the new transmitters will have a power of 50 kw in the aerial. They are additional to the two 10 kw. transmitters which, with that of the first British shortwave station, G5SW, comprise the existing transmitters at Daven-The power of the ex-G5SW trv. transmitter is to be increased to 25 kw. and it is possible that, at a later date, the other two will be combined to form a single unit of greater Ultimately, therefore, the power. BBC will have five transmitters in use exclusively for the Empire Service. In ordinary circumstances four of these will be used simultaneously.

The Chief Engineer said that eleven aerial masts have been added, bringing the total to 15 masts, ranging in height from 80 feet to 500 feet. Twenty-three aerial arrays will be provided by the system, to any one of which any of the transmitters may be connected. A complicated framework has been constructed to facilitate change-overs. To eliminate echo effects, all the aerials for wavelengths of 20 meters and below and some of the 25 and 31-meter aerials are equipped with reflectors.

To connect the twenty-three aerials to the "transmitter-to-aerial" exchange, six miles of open-wire feeder lines carried on 550 poles are required.

- (g.) Jack Siringer, 1451 Lincoln Ave., Lakewood, Ohio.
- (h). H. Wilcox, 623 W. 40th Place, Los Angeles, Calif.
- (i). Wm. J. Wood, 817½ Lake St., Oak Park, Ill.



**P**RETTY nearly every time someone writes in to report reception of a couple of foreign stations, a score or more of readers get out pen and paper to ask how it's done. Let a chap report a few hundred-watters from across the continent or even break down and admit that he's verified all the stations in a given group of states, and in come the letters to inquire about the secret of his success.

As close as I can judge, and I've been in the racket a few years, there isn't any hokus-pokus to DXing. I've never heard of any trick formula that will make an aerial break down under a load of Aussies or Europeans. And I'm sure that there isn't any magic ear which will enable one fellow to hear something that is inaudible to the other chap.

After spinning dials on many a long morning trick, DXing appears to boil down to the simple fact that "you either hear 'em or you don't." If you have a fairly good receiver connected to a decent aerial and if you listen at the right place at the proper time, you've got a pretty good chance to hear as much as the next fellow. Fall down on any one of these points, and DXing will be a rather unprofitable pastime.

#### Look At The Receiver

It goes without saying, of course, that a fairly efficient receiver is a most necessary factor for successful DXing. A listener doesn't have to own a large fifteen or twenty tube set, because some mighty fine results may be obtained on a seven to ten tube job of fairly recent vintage.

If a listener is planning to use his present set during the coming season, it would be a good idea to let a reputable serviceman go over it thoroughly. Lining up the various tuning circuits is an easy job when good service equipment is used, and the improved sensitivity and selectivity will be well worth the modest cost. A receiver is no better than its weakest tube, so a check-up here may bring in a fine dividend of distant stations.

If the budget will allow the purchase of a new model, an article in another section of this issue gives some pointers on selecting a good receiver. From time to time during the coming months, performance reports on various models will give tips on what each set will do in a DX way.

#### Aerials Are Important

Too little attention has been paid in recent years to the antenna. The high sensitivity of modern receivers has made it possible to obtain adequate signal strength from a great many stations even with a poor aerial installation. As a result, many listeners are content to string **a** wire to the nearest pole and let it go at that.

If DXers would take a page from the early history of radio, they would enjoy far better results than many now experience. In the old days, the limited range of crystal sets and single-tubers forced the erection of efficient aerials. Consequently, listeners put up lots of wire as high as possible.

It was no more difficult for the early receivers to pull in stations a few hundred miles distant than it is for present-day sets to log a hundred-watter across the continent or to span an ocean for a foreign station. Therefore, listeners who are anxious to better their DX records can't go wrong by reading the article on aerials in the September, 1936, issue of RADEX.

#### What Is DXing?

After the DXer has made certain that his receiving equipment is as efficient as circumstances will permit, he can turn to the consideration of what he wants to get out of the hobby.

Some DXers are primarily interested in building up the largest possible log of stations, whether they be local, semi-distant or foreign. Others are satisfied only when they hear stations at a very great distance, and to them anything within 1500 to 2000 miles is "purely local stuff." But regardless of how he looks at the hobby, the average DXer can determine what type of activity is best suited to his own taste.

He may be ambitious and decide to concentrate on foreign reception. If so, he will have plenty of company among the Radexers. He may consider the general conditions which existed during the past two seasons, and which will probably be repeated during the coming year, and set out to improve his log of stations. Of American North course, he won't pass up any foreigners which may trickle down his lead-in, but he won't neglect the stations which he has a reasonable chance to hear.

In the opinion of many listeners, DXing among our own stations can

be highly enjoyable pastime. It requires no inconsiderable skill and returns very satisfactory dividends. It does not necessitate spending an excessive amount of time and therefore attracts what is perhaps the largest group of DXers.

#### Fix Reception Goals

Probably the most interesting way to log stations on this continent is to establish definite goals for reception. You can pick crowded channels and attempt to verify every station listed. You might try to log all stations with more than 250 watts power, or see how many hundredwatters you can catch. You could set a mark of a hundred or so stations for the coming season and see how close you can come. Or you



Bottle and his boss, Phil Baker, caught by a candid camera man as Phil delivers a gag line. Bottle always comes to the studio in evening clothes, and changes into a butler's outfit for the broadcast. Harry von Zell, their announcer, took charge of their program as master-ofceremonies during the summer.

can shoot the works and attempt the creditable task of verifying all of the stations in the United States.

This latter goal would be a real achievement for any DXer and, conrary to the opinion of some listeners, it is by no means an impossible or even improbable ambition. If the matter is considered in a sane light and if the problem is approached in a methodical manner, the chances of success are not at all remote.

To achieve this goal, the listener would probably turn to the list of stations by frequency in this issue and check off those which are already verified. He might be starting from scratch and have no veries to check off, or he might have several hundred, but the main idea would be to identify the stations which he needed. Taking this group as a whole, he would attempt to classify the stations by the manner in which they could be heard.

Into one sub-group would fall the stations which broadcast monthly frequency checks. For the most part, these broadcasters are pretty easy to hear and all but a few should be logged within three or four months. The low-power stations at a great distance may require several attempts before a verifiable report has been logged, but even these stations should be heard at least once during a season.

The next group includes the stations which can be heard at some time on their regularly daily schedule. Some of these can be logged during the daytime when interference from other broadcasters is at Others can be heard a minimum. during the evening when they override the interfering stations on their channel or pop out unexpectedly when the dominant broadcasters does a fade-out. Early-evening hours. when darkness is just falling, is an excellent time to pick up stations not too far away. Late at night other stations can be heard prior to their sign-off, while the hour after 6 am finds many broadcasters just signing on for the day.

To receive the stations in this group, consult the schedules in RADEX and determine the best time to hear them. It may be noted that a needed station remains on the air at night after the others on its channel have signed off, or it may commence broadcasting a few minutees earlier in the morning. Even when two stations are supposed to sign off at the same time, one of them may have a final announcement which will give a DXer a few minutes in which to take down a summary.

After the listener has checked off the stations which he might hear on their regular daily schedules and has noted those which transmit monthly frequency checks, he will have left over a third and final group. These are the stations which will be heard only during special broadcasts, and the DXer will have to depend upon hearing a chance equipment test or a program dedicated to one of the radio clubs.

#### A Practical Example

All this sounds very well in theory, some readers will say, but how are we going to put this classification idea into practice? How are we going to know when to tune for the stations we need?

In answer to this rather typical question, let's take a practical example. Let's look at the 1210 keys channel, where 53 U.S. stations are assigned. Of this total, no less than 43 can be found in the current frequency check schedule. Therefore. very DXer is going to have a monthlv crack at all but ten of the stations on this channel. Of the ten remaining stations, KFPA, WLMU and WSNJ have not as yet commenced regular transmissions and cannot be classified as active stations. When they do come on the air, they probably will be assigned to the frequency check schedule. That leaves but seven stations unaccounted for—KFOR, KFXM, KPPC, WCRW, WEDC, WJEJ and WSBC.

Looking at the time on the air for these broadcasters, it is noted that KFXM is on until 3am EST daily except Saturday and Sunday. With a reasonable bit of luck, a DXer in any part of the country should be able to hear that station some morning this winter. Of the three time-sharing Chicago stations. WSBC signs off at midnight EST and is usually followed by WEDC for Thus, the latter an hour or two. shouldn't be a difficult catch for and Central listeners. Eastern WCRW's schedule is unfavorable for distant reception, so this station as well as WSBC will have to wait for a special program. The same is true of KPPC, KFOR and WJEJ. Thus, out of a total of fifty active stations on a crowded channel, only five cannot be heard at any distance on their regular programs. And of these five, the chances are excellent that at least two or three will broadcast one or more special programs during a winter season.

Any other channel in the entire broadcast spectrum can be analyzed in the same manner. DXers can easily determine if a station has a chance of being heard either on a regular program or on a frequency check transmission. If this is not possible, the desired station falls into the third classification and must wait for a special.

Fortunately for listeners, the courtesy programs committees of the various radio clubs are usually very active in arranging specials from stations in this latter group. All wise DXers should make a point of joining one of the clubs and take advantage of CPC work.

#### **Dialing The Foreigners**

Reception of a foreign station on the broadcast band is a happy occasion which occurs too seldom in the life of the average DXer. Yet there is no reason in the world why most listeners shouldn't experience this supreme DX thrill a few times in any season.

Here, as in the case of domestic DXing, the primary requisites are a good receiver and a knowledge of when and where to tune. Perhaps the only other important factor is a certain degree of tuning skill, which, after all, is largely a matter of pa-

tience and perseverance.

Too often a DXer will give up when a nice trans-oceanic catch is within his reach. He forgets that signals from Europe and Australia are necessarily very weak, and when he fails to log the station immediately, he is inclined to turnaway in search of a more powerful signal. Until he conquers this tendency, he cannot hope for success.

Also, many listeners complain that they have heard many foreign stations, but were unable to get a report. Actually, they could not understand the announcements and were not able to identify the selections heard. If a DXer hears a station and cannot jot down the fact that he heard a man talking, an orchestra playing a waltz, a woman singing, a violin solo or a choral number at a definite hour—if he is unable to make a report out of such items, he certainly does not deserve to receive a verification.

But even assuming that a listener knows what to do with a station when he hears its faint signal, he still has to tune the carrier in the first place. And that involves a certain knowledge of when and where to tune.

#### When To Tune

Foreign reception on the broadcast band is a very seasonal matter, and unless the months and hours are taken into consideration, there is little chance of success.

First to arrive this season will be the stations in Australia and New Zealand. They will be at their best in October and November, and then they will drop out of hearing until the peak months of March and April next spring. This is true simply because while we are having our fall, they are having spring—and vice versa. Thus, the seasons at both ends of the path of the signal are similar.

The New Zealand signals generally become audible just after 4 am EST,



An interesting subject, interesting mood and interesting pose completed the composition of the photograph of Irving Berlin, made by Ray Lee Jackson, NBC staff photographer. This was judged the "Most Interesting Portrait" in the NBC Photographic Exhibit.

when it is 10:30 pm down there. A little later, the Aussies begin to push through, and from then until daylight, the stations increase in strength. As there is practically no interference from other stations with which to contend, the Aussies and Zedders are perhaps the easiest to tune.

Also during the fall months, South American stations make their appearance. However, since they are on the air while our own locals are still broadcasting, they provide rather a difficult test for the average DXer. With the exception of occasional early morning special DX and test programs such as the Bureau of Standards conducted the past two years, the best time to tune the SA's is in the early evening hours before the dominant locals have reached their peaks. By tuning to the frequencies of the more powerful stations, it is often possible to pick up a station in Brazil or Argentina,

The months of November, December and January find trans-Atlantic reception at its best. The European stations are generally considered as being divided into two district class-es—those which are heard between 6 and 7 pm EST, and those which must be tuned between 1 and 3 am EST.

In the first class we find the stations which are just concluding their day of broadcasting and sign off at 11 pm or midnight GMT. Operating on split-frequencies which necessitate extremely selective receivers and bucking a barrage of our own domestic transmitters, these Europeans are very difficult to hear. However, shortly after dark and before the locals reach a signal peak, listeners along the Atlantic Coast have had any number of good catches in this class.

The second group of European covers the German, French, and Italian stations which are just signing on for the day. Many of them are broadcasting as early as midnight EST, but are not heard until after 1 am when our own locals have gone to bed. By 2 am they are in full swing, only to fade out shortly before 3 am. As possible interference on these transmitters is limited to our late broadcasters, many of whom are sufficiently distant to allow close tuning, this group of Europeans offers the best chance of spanning the Atlantic.

Occasionally it is possible to dial the other two continents—Asia and Africa. West Coast listeners report Japanese and Chinese stations regularly between 3 am PST and daylight during the middle of the winter, but their signals are seldom heard East of the Rockies. A few Atlantic Seaboard DXers have been successful in logging and verifying an occasional African station, but this is decidedly freak reception and hardly worth the time spent in fishing.

(Please turn to Page 48)

# The MONTH'S CHANGES in STATION DATA

#### VEW

		NEW
680		Lawrence, Mass.
1120		Austin, Texas
1200	KVGL	Greenville, Texas
		Salisbury, Md.
		Toledo, Ohio
1210	KHGB	Okmulgee, Okla.
1240	XEAY	Okmuigee, Okia. Mexico City, D. F. Wilson, N. C. Fresno, Calif. Lufkin Texas
1310	WGTM	Wilson, N. C.
		Fresno, Calif.
		Pittsfield, Mass. Dubuque, Iowa
1340		Dubuque, Iowa
1370	KLBM	Lawrence, Mass.
1420		La Grande, Ore. St. Cloud, Minn.
		St. Cloud, Minn.
		Sioux City, Iowa Centralia, Wash.
1440		Centralia, wash.
1500	WKAT	Miami Beach, Fla.
	WOMI	Owensboro, Ky. FBEQUENCY
		FREQUENCI U-bong III from 890
580	WILL	Urbana, Ill., from 890 Havana, Cuba, from 1500 Mexico City, D. F., from 610
850	CMCN	Mexico City D. F., from 610
1080	XEDP	(XEXM)
	77 4 7 73	(ABAM) Alexandria La from 1420
1210	KALB	Alexandria, La., from 1420 Havana, Cuba, from 1470
1260	CMOK	Chica Calif from 950
1050	KHSL	Chico, Calif., from 950 Jamestown, N. Dak., from 1310 Lewiston, Idaho, from 1420 Medford, Ore., from 1310
1370	KRMC	Lauriston Idaho from 1420
1390	KRLC	Modford Ore from 1310
1410	KMED KATE	Albert Lea, Minn., from 1200
1420	KAIL	LOCATION
1450	WTFI	Atlanta, Ga., from Athens
1450	** 11.1	
580	KMJ	POWER Fresno, Calif., 1000 from 500 Omaha, Nebr., 1000 from 5000 Scranton, Pa., 1000 from 250 Philadelphia, Pa., 1000 from 250 Philadelphia, Pa., 1000 from 250 Datroit Mich 5000 from 1000
590	wow	Omaha, Nebr., 1000 from 5000
880	WQAN	Scranton, Pa., 1000 from 250
920	WPEN	Philadelphia, Pa., 1000 from 250
020	WRAX	Philadelphia, Pa., 1000 from 250
	WWJ	
1000	KFVD	Los Angeles, Calif., 1000 from
1000		250
1200	KOOS	Marshfield, Ore., 100 from 250 Jamestown, N. Y., 100 from 50
1210	WJTN	Jamestown, N. Y., 100 from 50
1260	KRGV	Weslaco, Texas, 1000 from 500
1330	KRIS	Weslaco, Texas, 1000 from 500 Corpus Christi, Texas, 500 from
		250
1370	KTEM	Temple, Texas, 250 from 100
1390	KRLC	Lewiston, Idaho, 250 from 100
1500	KNEL	Brady, Texas, 250 from 100 Paris, Texas, 250 from 100
	KPLT	Paris, Texas, 250 from 100
		NETWORK
560	KFDM	Beaumont, Texas, new Blue
630	WGBF	Beaumont, Texas, new Blue Evansville, Ind., new Blue Scranton, Pa., new CBS
880	WGBI	Scranton, Pa., new CDS
890	KARK	Cioux Folla S Dok new Blue
1110	KSOO	Albumperene N. Moy new Blue
1180	KOB	Anderson S. C. now CBS
1200	WAIM	Scranton, Pa., new CBS Little Rock, Ark., new Blue Sioux Falls, S. Dak., new Blue Albuquerque, N. Mex., new Blue Anderson, S. C., new CBS Wichita, Kans., new Blue Macon City Jowa new CBS
1210		Magon City Jowa new CBS
	KGLO	Jamostown N. V. new Blue
	WJTN	Mason City, Iowa, new CBS Jamestown, N. Y., new Blue Richmond, Va., Red from CBS New Orleans, La., new Blue
1050	WMBC WDSU	New Orleans La new Rive
1250		
1260 1310		Terre Haute Ind new Blue
1310	WOL	Washington D C. new MBS
	WROL	Westato, Texas, new Blue V Terre Haute, Ind., new Blue Washington, D. C., new MBS , Knoxville, Tenn., new Blue Birmingham Ala., new Blue
	WSGN	Birmingham, Ala., new Blue
<b>13</b> 20		Diriting finant, fritar, fiett
1020		Louis Luis non Dian

1330	KRIS	Corpus Christi, Texas, new Blue
1340	WFEA	Corpus Christi, Texas, new Blue Manchester, N. H., new Blue
	KIDO KWK	Boise. Idaho, new Blue St. Louis, Mo., new Blue
1380	WKBH	St. Louis. Mo., new Blue La Crosse, Wis., new CBS
$1400 \\ 1410$	KHBC KGNC	Hilo, Hawaii, new CBS Amarillo, Texas, new Blue
1420	WJBO	Poton Pouge La new Blue
$\frac{1430}{1440}$	WNBR KXYZ	Memphis, Tenn. new Blue Houston, Texas, new Blue
1440	WSAN	Allentown, ra., new Dide
<b>95</b> 0	WHAL	CALLS Saginaw, Mich., from WJOY
1080	XEDP	Saginaw, Mich., from WJOY Mexico City, D. F., from XEXM New York, N. Y., from WLWL
1100	WBIL	New York, N. Y., from wLwL REINSTATED
1210	WLMU	Middlesboro, Ky.
1000	WNRI	DELETED Newport, R. I.
$1200 \\ 1400$	WARD	Brooklyn, N. Y.
	WLTH	Brooklyn, N. Y. Prescott, Ariz.
1500	KYCA	OWNERS
1010	WNOX	Scripps-Howard Radio, Inc., Knoxville.
1050	KFBI	Farmers & Bankers Brdcstg. Corp., Abilene
1080	XEDP	Departamento de Publicidad y
1100	WBIL	Propaganda, Mexico City Arde Bulova, New York Ala, Polytechnic Institute, Uni-
1140	WAPI	Ala. Polytechnic Institute, Uni-
		versity of Ala. State College, Birmingham
1200	WCPO	Scripps-Howard Radio, Inc.,
1210	WSIX	Cincinnati WSIX, Inc., Nashville
1310	KHUB	Anna Atkinson, Watsonville
1370	KIUP	San Juan Brdcastg. Co., 2800 Main St., Durango
CON	STRUCT	TION PERMIT TO CHANGE
1190	WATR	FREQUENCY Waterbury, Conn., to 1290
1210	WMBG	
1310	KIT WOL	Yakima, Wash., to 1250 Washington, D. C., to 1230
1420	WJBO	Baton Rouge, La., to 1120
CON	STRUCI	TION PERMIT TO CHANGE POWER
560	KSFO	San Francisco, to 5000
590	WKZO	Kalamazoo, to 250 Norfolk to 1000
780 880	WTAR WCOC	Meridian, to 1000
900	KGBU	
050	WLBL	Stevens Point, to 5000 Washington, D. C., to 1000
950 1010	WRC CKCK	Regina, to 1000
1200	WJRD	Tuscaloosa, to 250
1210	WMBO	Frichmond, to 500
1340	WCOA	Pensacola, to 1000
1420	WJBO	Baton Rouge, to 500
1440	WMBI	
1490 CON	WCKY STRUC	TION PERMIT TO CHANGE
560	KSFO	LOCATION San Francisco, to Oakland,
<b>5</b> 70	KGKO	
880	WRNI	Texas Petersburg to Richmond, Va.
1500		
		1 4/14/0

## What Is a DX CLUB?

There aren't many members of any DX club who know how the darn thing runs. To most members, headquarters is a postal address and the officers of the club are names. They know that the thing does run, because they receive their bulletins on time. But only the men who put out those bulletins, and answer letters and run contests and keep ledgers and cut mimeograph stencils and arrange specials and buv stamps, know what a DX club really is.

This issue of RADEX is dedicated to the Universal DX Club, whose chief officer is Alfred J. Stansfield, whose headquarters are at 345 Maple Ave., Oradell, N. J. It's not the oldest DX club in the country, nor quite the largest, nor, perhaps, the best, but DX'ers should be proud to call it representative.

And if you'd like to know what a DX club really is, accept our invitation and travel in your imagination to the headquarters of this club and see with your own eyes how the thing runs. You may be disillusioned, but that's all right. The true background of a club is more interesting than any false front.

Suppose you turn back the clock and time your visit to a night last winter, in the height of the DX season. Make it a night near the middle or the end of the month, just before the club's twice-monthly bulletin comes out. And make it some ungodly hour of the morning.

Oradell is a village of only 3000 souls, and you won't have much trouble finding Maple Avenue. All the houses along the street are dark —it's a respectable village!—but you know that there must be DX'ers somewhere about. And at last you see the light in 345, a light stream-

#### • • • By "POOKY"

ing out over the snow, from the basement window of a modest white frame house.

You know you're welcome, so tiptoe around to the back and go down cellar. Over to the left, under a bulb suspended from the ceiling, there's a small printing press, for this club prints all its own stationery at true cost. Beside it, there's а mimeograph machine. There seems to be no one about at the moment. The lady of the house would have fits if she could see the light burning.

But there's the sound of typing at the far end of the cellar, behind that door. Go over to it. What was that that slapped you in the face? Well, that was the laundry that has been hung in front of the furnace to dry.

Open the door, and there you are!

Yes, this is the center of the world for the members of the Universal DX Club, this small, crowded, smokefilled room under a bay window. The members have heard about the catches of those two radios in the Their letters to headquarcorner. ters have been answered on those two typewriters. Their dollars (a complete membership in this club costs only a dollar a year) are in that box on that ledger. Their hobby is in the hands of those four tired, perspiring, worried men.

Last winter you would have found Allan Hoppenstedt there, the man of the house, aged 24, by day a member of an exporting firm in New York City, by night the Contest Editor of the bulletin. You would have found his brother Elbert there, aged 21, a clerk in a bookstore, and Managing Editor of the bulletin. You would have found Dave Owen there, aged 24, a writer and general cut-up, then BCB Editor of the bulletin. And always you would have found Al Stansfield, as the President, as Editor-in-Chief, and as guiding force and spirit of the club.

Elbert is cutting the mimeograph stencil of the first page of the bulletin, which will appear under the Old English "Universal printed News," and the blue seal of the This club takes more than club. ordinary pains with its bulletin and this first page must be perfect. Elbert is sitting hunched over the typewriter with his shoes off. his face а mask of concentration. meticulously tapping out the lines with two fingers. This is the SW column he's doing, sent in to headquarters from out of town by the SW Editor, garnered by him from members all over the world, checked and classified by him and made into clear, worth-while reading. There will be three neat white pages of it—if Elbert holds out.

Dave is kneeling on the floor, rearranging his BCB column for the last time. He's typed out each item on a separate slip of paper and it's a deadly serious game with him to line up those slips on the floor to make the best reading. He has a tip on an 8-watt rig in Quebec. He has the explanation of a new Mexican that's been causing confusion. He has the complete schedule of stations. the Scandinavian all worked out by the Norwegian Representative. He has a list of four new Aussies, sent up from down There will be three blue under. pages of these, and FCC data, and scheduled DX programs, and puns, tistic arrangement.

"Hoppy," as Contest Editor, is sprawled on the sofa, writing furiously, muttering under his breath. There were four UDXC contests last season, designed for all kinds and stages of DX, and they were all a

trial to "Hop." He's writing up the Singleton and Eliminator Contest now, for which the prize is a vear's subscription to RADEX. He's finished his work on the new Universal BCB Contest, for which the prize is nothing less than a silver trophy. He has still to comment on the Junior BCB Contest, for which the prize is a bushel basket of early tomatoes sent postpaid from the farm of a member in Texas! And then he has to look over the Universal SW Contest-another silver trophy. There will be two vellow pages of contest material---if "Hop" can win his own contest with the heat from the furnace and the smoke from Elbert's cigar and the time on the wall.

And Al-Al is doing a dozen things at once, from deciding the future policy of the club to stamping envelopes. Mostly he's watching the time on the wall and worrying. This isn't an unusual night for him. He's seen dozens of bulletins born. But he can't help feeling, each time a new one goes into print, that he's entirely responsible for it. Now he's addressing envelopes to DX'ers who want to see a sample. Now he's writing an editorial and greetings to members and comment on the doings of the DX world, that will appear on one white page, the last page—without an "if."

Elbert hits the wrong key and nearly swallows his cigar. "Hoppy" finishes the S & E Contest and wearily tosses it onto the desk. Al makes a dive for it. Dave bellows, picks up his scattered slips, and thoughtfully rearranges them again.

The "Universal News" will go out on time. Before the date changes some of the members will have it in their hands. Within a few days members from Newfoundland to Nicaragua will be reading it. With-

(Please turn to Page 47)

## **Our Readers' RADIO PROBLEMS**

#### **Beat Oscillator**

I am the owner of a Crosley radio type 7H1. This set is now being used with a converter for the short waves below 160 meters. Can you tell me the intermediate frequency of this set? I am planning to use a beat oscillator with the set to help in locating weak signals, and would like to have some information on beat oscillation as a means of picking up weak and code signals.

The Crosley receiver which you have is a set with 7 tubes, one of which is a rectifier. Its intermediate frequency is 456 kilocycles.

Many receivers which will pick up modulated radio signals such as voice and music are silent when it comes to C. W. or continuous wave signals, such as much of the unmodulated code now in the air on the short waves. Therefore, a beat oscillator is always a part of any amateur or short-wave superheterodyne set. These oscillators are similar in principle to those used for the frequency conversion in the set to match the intermediate frequency circuits, or 456 kilocycles, in your case. The beat oscillator however is tuned very closely to this intermediate frequency. The output of the oscillator may be coupled to the second detector. One of the most common methods is to use a small bypass or coupling condenser-.0005 mfds. The B. O. output from its plate is connected by means of shielded wire to the output from the I. F. transformer leading to the second detector. Or the plate of a type 58 tube, for instance, in a simple oscillator circuit can be attached to the screen grid of the second detector tube by means of a short, shielded wire. There are many methods of attaching the beat oscillator

#### • • • By B. Francis Dashiell

output, and your service man can easily assist you in making the arrangement. Or you may purchase a small B. O. unit at slight cost. This c. w. beat oscillator is switched on so as to provide a separate carrier wave signal in the second detector, and this heterodyning effect, if the B. O. frequency is close to that of the receiver's I. F., will break up the c. w. signals and make them audible.

#### **Recording Signals**

I have a phonograph pick-up and turn table, and also have a home recording disc. Is there any way by which I can record on the disc by running the pickup over it with the turn table and operate it all from my radio set? I have tried recording with an ordinary phonograph but this does not reproduce sufficient volume from my radio loud speaker to do the work.

We are sorry but it is not practicable to make recordings using an ordinary phonograph pickup on the home recording disc. The construction of the pickup is such that it merely takes the tiny vibrations from a record played on the phonograph and converts these vibrations into weak pulsations of electric current. This current in turn is stepped up by a transformer and fed into the audio circuit of the radio set where it is greatly amplified for the loud speaker. There is no method by which strong currents from the output of a radio set can be fed back into a pickup through the transformer circuit so it will set the pickup into vibrations which in turn will cut the recording disc. The construction of the pickup is such that it will not work. It is like talking into a telephone receiver and expecting to hear sound come from the transmitter.

The only practicable method of making home recordings of radio receptions is to use a special disc cutting unit. The cutter is similar to a telephone receiver and attaches to the output of the radio set and cuts its signals into the disc so they may be reproduced at will. This device is rather expensive. No doubt many of our readers have arranged similar devices, and we shall be glad to hear from them and publish such reports as may be of interest.

#### 20-Meter Antenna

I am planning the erection of a 20-meter antenna, of the doublet type, but do not know whether the distance between the two halves of the doublet is important. Should these two halves be separated by a distance of four inches the same as the transposition leadin wires and blocks? Is it necessary that the two spaced leadins be vertical, and may they be brought directly to the set?

The distance between the ends of the two halves of the doublet antenna is not critical, but it seems to be the general opinion that approximately 4 inches is correct. A doublet receives best the signals that have wavelengths just twice the total length in meters of the two wires making up the horizontal flat top of the antenna, *including* the open space between the ends at the center. Therefore, it is expedient for us to make this open gap as short as practicable.

The two spaced vertical leads which should be transposed every two or three feet tend to eliminate the noise that is picked up, as well as signals, between the flat top antenna and the radio receiver. This line may be as long as desired but should hang free of the building wall or other objects by at least two

feet. It may drop down in a vertical line, or run at different angles. It should be guyed carefully where necessary to prevent swaying and twisting. Or a twisted transmission line may be run down from the doublet to the set. In any case a piece of twisted lead-in wire should be used to attach the ends of the two transposed leadins just outside the house, to the radio set indoors. A lightning arrestor must be installed outdoors at the end of the transposed leadin.

#### **Phonograph Oscillator**

I have purchased a crystal pickup for use with my model 60T Stromberg Carlson receiver. Would the use of a phonograph oscillator make enough difference in quality of reproduction to prove worthwhile?

The usual phonograph pickup is connected directly into the radio set. This is always more or less troublesome and usually a job for a good service man. But when the oscillator is utilized, all internal connections are eliminated to a great extent. The device is really a tiny radio receiver that obtains its power from the receiver unit, and is modulated by the phonograph pickup. Its installation requires but a few min-The modulated signal from utes. your pickup coil is fed directly to the antenna connections of the receiver. and the set itself then handles the signal just as it would any intercepted radio signal. The volume control of the set provides all the volume control that is needed. This is a very simple arrangement and gives good tone, volume and is easily operated. The greatest objection to it is the additional expense over the older method of hookup.

Because of the high resistance of your crystal pickup it can be attached between many points in the circuit without the use of matching or setup transformers. Usually the crystal pickup is connected between the control grid of the second detector tube and the chassis or negative B side of the following audio tube. Other positions are very satisfactory and your service man can quickly make the installation, and this is always to be recommended.

#### **Night Distortion**

I have a Philco 45, and reception is very good during the day, but at night the signals seem blurred and distorted until I move the dial off about 10 kilocycles to one side of the station being received. It clears up for a short time and the trouble is again noticed, after which I return the dial to its original setting and the poor reception starts all over again. What do you think may be wrong?

At night the signals being received are much stronger than during the daytime. This additional energy or volume can be distorted in a number of ways. Frequently there is a bad tube involved. Some tubes do not show this defect, so we suggest that the type 6A7 be replaced as a test method.

This set may be aligned by ear, but the use of an oscillator is recommended. If you do the work by ear turn the volume control down so low that signals can hardly be heard. In this way you can distinguish easily between low and stronger sounds. You might also try the plate bypass condenser in the plate lead of the type 75 tube. The voltage on all tubes should be tested to see if it is at the proper working potential. Of course, proper alignment and balancing of a set, by a competent service man, should eliminate most distortion due to broad tuning of strong signals at night.

#### Short-Wave Set

I feel the need of a good communication short-wave set that will



This clock-watcher is no other than Alexander Woollcott, the famous "Town Crier" of the Columbia network. Here he is shown waiting for the last few tense moments just before his broadcast while he prepares to ring the deep-toned bell which is almost as integral a part of the program as Woollcott himself.

really do the work on the high frequencies without bothering about the longer or broadcast waves. Local static is bad, and I wonder whether reception will be better using one of this better class instruments. Can you advise me about a good set?

It is obvious for several reasons why we cannot definitely recommend one particular short wave receiver. First, there are a number that are excellent. The cost of a good short-wave communications receiver is, of course, quite high when compared by the selling price of smaller all-wave receivers that cover the same wave bands. Many of these fine short-wave receivers utilize crystal control, band, spreading and other features that are considered necessary, and all of this adds to the cost.

Of the concerns making communication receivers we might mention for your information, the National Co., of Malden Mass., The Hammarlund Co., of 424 West 33rd St., New York, N. Y., The Hallicrafters, of 2617 Indiana Ave., Chicago, Ill., the Radio Corporation of America, Camden, N. J., and there are a few others who deal with the communication and amateur market. We think, if you write to these manufacturers, mentioning RADEX, they will gladly give you much information which you can compare to your own satisfaction.

The problem of interference will remain to a certain degree regardless of the set you may own. Some of the finer sets with sharp tuning and crystal control, although such hair-line work may cut down the quality of the tone of voice broadcasts in the short waves, will, of course, cut out considerable of the static noise. This is particularly noticeable when receiving code on CW emission. The use of a good doublet antenna high on your roof, with a long twisted leadin, should help you considerably.

#### More Short Waves

Please tell me if there is an efficient radio set that will cover only the bands between 5 and 20 megacycles (5,000 to 20,000 kilocycles). I think that a set of this range will be just what I need, if it does not cost too much.

There are many sets that embrace the tuning limits you have mentioned, but they also cover other frequencies as well. If you are interested in just the short waves and desire the highest efficiency on these bands, a communications or short wave amateur or commercial receiver will give excellent results. However, these are expensive sets, and even then do not cover just the limits you have mentioned. They will usually range farther down into the short waves. Some sets, such as those made by the National Company, utilize interchangeable coils and it is then possible to procure a set of coils that will take in prac-

tically the limits you have defined. See the answer to the query above.

#### **On Again—Off Again**

I have had my set since 1929. The tubes test nicely, but I just had two replaced as they were weak. I am using one weak tube at this time but it seems to be pretty good. The set will play one day and go silent for two, and then play again for two days and guit for another two or so. My service man says the weak tube cannot cause this trouble. I can not think what causes the set to be playing well and then suddenly to drift away, but play nicely again the next morning. Can the one weak tube be the cause of this trouble?

This trouble, often called intermittent reception, can be caused by a weak tube or one that has defective elements that short circuit and render the set dead for a time until it is turned off and becomes cool. Heating or warping of some of the parts within the tube can cause this. A new tube, when one is not up to standard, is always indicated in any set, whether it works well or not.

Intermittent reception may be due to poor prong contacts between the tubes and sockets; a short circuit in the tube or its socket; a broken or burned out coil in the audio circuit or even in the loud speaker voice coil; bad connections somewheres in the circuit, or poorly soldered contacts to the chassis. It seems to us that heat causes some expansion of a part and that in turn causes the circuit to open. In this respect you can look for trouble in a resistor or coupling or bypass condenser. The only remedy is a careful check of all parts and wires of the circuit, sometimes resoldering all the contacts. However, we think the trouble is due to some part of the circuit opening after the set heats up, and that this is due to a break or short circuit. Repairs should be inexpensive. But since you did not mention the make of your set we cannot help you other than in this general way.

#### **Broad** Tuning

I have a little midget set, but there is a local radio station that comes in all over the dial between 1180 to 1500, although the station operates on 1280 kilocycles. Why is this?

Broad tuning or poor selectivity may be due to the set, which, if it is not sufficiently built with selector circuits, may allow a strong nearby station to come in over much of the Corrective measures consist dial. of a careful alignment of the tuning parts and checking and testing of the r. f. coils and tuning units or condensers. A defective tube in a set of this kind can cause poor selectivity. A good service man should be able quickly to correct this fault if it is not inherent in the set. On the other hand, the frequency of a radio station and that used in the i. f. of the set, may be such that a certain amount of the signal will be forced through the tuning circuit over a wide portion of the dial. In this case there is little that can be done with a tiny set of this type.

#### **Tube Action**

How does the current flow through a radio tube? Does it flow from the filament to the plate? That seems to be the way electricity flows, yet from what I can understand the current flows from the plate to the filament, and this would be contrary to the flow of electricity from a negative electrode.

The movement of electrons—bits of negative electricity is *always* from the negative to the positive terminal. This drifting of electrons makes up the electric current. If the plate of the tube is attached to the positive terminal of a battery, the cloud of electrons will be at-

tracted to the plate. But, while a circuit is completed, and electrons flow from the cathode or filament to the anode or plate, the current from the battery flows from the plate to the filament. This is because the internal flow of electricity in a battery is from the cathode to the anode, or from negative to positive. But when a circuit is completed, the current enters the external circuit from the anode, flows through the circuit, which in our case consists of the ionized space between the plate and the filament, and back to the other external battery terminal or negative cathode. The flow is continued with the cycle beginning again anew through the interior or electrolyte material of the battery. The movement of the electrons within the tube has little to do with the actual movement of current through the radio circuit. However, there is at present some debate about this flow, and some students feel that the electronic flow from the filament to the tube plate is continued out through the plate circuit and back again into the tube and its cathode. When a battery is attached to a tube, however, it is difficult to conceive of anything other than that which has been described above.

#### Vertical Antenna

Will you please explain something about the vertical antenna system and its advantages. I understand that many radio stations are using the vertical radiator antenna.

The vertical antenna is of greater interest to transmitting station operators and amateurs than the average radio listener. It has many technical virtues, of course, but is not so popular in general. It is a simple antenna. It is effective in reception when nearby signals that are vertically polarized are picked up. It is not directional, like the (*Please turn to Page* 47)

# DX Notes from FOREIGN

Representatives

#### $\bullet \bullet \bullet Of the UDXC$

Broadcast Band DX in New Zealand N EW Zealand is claimed by scientists to be the best country in the world for radio reception, as it is the farthest country from the magnetic pole, and this latter may have much to do with good reception.

In the winter, between May and August, one can begin DX'ing at 2:30 p. m. The first country one hears is South America. At 3:30 p. m. the Mexicans, Cubans and higher powered EST, USA stations; and then at 4:30 p.m. USA stations from east to west are heard. Several of the higher powered Australian stations can be heard also throughout the entire day during the winter, but this country is always best received at about 5:30 p.m. At 9:30 p. m. the Japanese stations are heard and these are followed by Chinese, Siamese and Indian stations. At approximately 7 a. m. Europeans appear and can be heard up to 8:30 a.m. The most prominent of these are the French stations. We can say down here that one can DX practically every hour of the day.

During the summer months the Australians are much weaker and the USA stations are at their best. Quite a few of these, including the Canadians, can be heard from 11 p. m. and on, up to 3 a. m. the following morning, broadcasting their early morning programs, with EST stations being the first heard and the PST the last. At 4:30 a. m. the Hawaiian stations open up.

October and February are the two best months for Europeans, these being heard between 3:30 and 5 a. m. Almost any country on the European continent can be heard during this period.

-By Robert Newton, New Zealand Representative, UDXC.

#### All Wave DX in England

Reception of Asiatic (except Jerusalem), Australasian, or South African medium-wave stations in England is very rare. North and South American broadcasters can be heard almost nightly during the winter and frequently in the summer.

American signals have been picked us as early as 9:30 p.m. GMT, and as late as 9 a.m. but the most popular listening period is after 11:30 p. m. during the winter. In the summer North American signals do not commence to arrive until about 2:30 a.m., although the Americans are receivable South before sometime that. WCAU. WTIC, WBZ, and WOR are about the best NA's and LR1, followed by LR3-5-6, LS2 and PRE8 are the SA headliners. SA's are more consistent, but except LR1, are less powerful signals than NA's.

All the USA shortwave stations except W4XB and W9XAA come over quite regularly, with W2XAD and W2XAF about the pick. DX stations regularly received include VK2ME, whichever of the Japanese stations carries the European Hour, Bandoeng and a multitude of Latin Americans. These Latins, however, are not usually receivable until late at night or early in the morning. Heard occasionally but not well are VPD, ZTJ, VQ7LO, Radio Colombo, etc.

Ultra shortwave trans-Atlantic reception is erratic but sometimes better than might be expected. W9XAZ seems to be the most widely heard of these stations, but audible at times are W8XWJ, W3XEJ, W8XAI and others.

-By R. A. Stansfield, English Rep., UDXC.



Henny Youngman, comedian with Kate Smith, proved an instantaneous success in his first appearance on the "Bandwagon" program, and won a regular spot on this hour. He made some kind of a record when a careful check of one of his monologues revealed that he provoked mirth 38 times in five minutes and ten seconds.

#### All Wave DX in France

During the daytime England, Belgium, Luxembourg and Germany are received perfectly on the broadcast band. As soon as night comes on, all principal European stations, as well as Algiers and Rabat are heard very well. In the winter and very late at night, several of the most powerful USA stations can be heard faintly.

On the shortwaves all continents are received, although at different times and different seasons. In the mornings from October to April from 7 to 9 a. m., GMT, Australia is heard—the ultimate in DX for us. Moscow is generally well received at all hours. Toward noon the first USA stations break through on 13 meters, then later on 16 and 19 meters, and in the evening on 25, 31 and 49 meters. During the afternoon Hong Kong, Macau and Bandoeng are sometimes heard, but this is true in the fall and winter only. In the evening, everything on the American Continent from Canada to Chile is received. Cuba is the best.

Northern Africa is heard very well, but South Africa is heard very infrequently, it being the most difficult to receive of all countries. The shorter waves of 19 meters make it possible to hear Asia very easily all during the day in the summer time.

#### -By Robert A. Muguet, French Rep., UDXC.

#### Shortwave DX in Algeria

As a rule, DX'ing is not particularly good in Algeria, especially in Algiers, which is located exactly in the center of French North Africa.

In Algiers there are many amateurs with powerful transmitters and receivers, and they work all of Europe very easily on 'phone; yet, real DX is very hard. Other hams located in Casablanca (Morocco) easily work America and they have no better equipment. The very same thing applies to Tunis. It is also true that there are not many USA hams who have worked Algeria—Algiers in particular.

European shortwave stations are heard equally well all during the day and at night. Outstanding are the German and British stations, on all bands—13, 19, 25, 31 and 49 meters. The only countries that are not well heard are Denmark, Sweden, Norway, Australia and Iceland.

First among real DX stations to break through are W2XE on 13 meters and YDC on 19 meters, both coming in at 12 noon, with 2XE continuing until 3 p. m. GMT, sometimes with an R9 signal, and YDC increasing to R8 at 3:30 p. m. Between 3 and 3:30 p. m. PMN on 29 meters is also heard but not well. Japanese stations JVH. JZI and JVM are heard regularly on transmissions intended for Europe (7:30 to 8:30 p. m.), and may be compared to local stations. Actually YDC (and YDB), PMN and the Japanese are the only consistent Asians, as HS8PJ in Siam produced a powerful signal only last October. November and December and has inaudible ever since. The been same applies to VUB Bombay.

After 10 p. m. all of America comes in, numerous stations being heard from South, Central and North America. The best countries are the USA, Colombia, Venezuela, Cuba, Brazil, Dominican Republic and Costa Rica. The poorest are Canada, Panama, Mexico and Argentina. The writer has never heard Guatemala, Peru, Ecuador, Bolivia and Uruguay.

The best wavelengths in the winter are 31 and 49 meters, many R9 signals being the product of these bands around 2 and 3 a. m. This good reception continues until 8 a. m. in the winter season. The summer reception on these bands continues until 6 a. m. In the spring the 25 meter band is good, W8XK being outstanding between midnight and 2 a. m.

A strange fact is the bad propagation between North and South Africa. The writer has never heard a South African station except the Capetown commercial on 15 meters, and this on only one occasion. We are told, incidentally, that North Africa is seldom heard in South Africa.

-By Rene Pleiber, Algerian Rep., UDXC.

### New Stamp Issues

IT SEEMS that the stamp collecting and radio hobbies go hand in hand. Stamp collecting, often called the "King of hobbies and the hobby of kings," is an enjoyable and sometimes profitable pastime, and radio listeners who receive mail from overseas countries quickly form the nucleus of a good general collection by saving the stamps they get on their correspondence.

So many readers have expressed an interest in stamps that we have decided to include a few items each month in RADEX on new stamp issues. Our observations will be limited to the current issues of those countries where radio stations exist.

The UNITED STATES is fast becoming one of the most prolific of stamp-issuing countries. The most recently issued USA stamps, still available at most postoffices, are listed below:

The 3c Northwest Territory, first issued from Marietta, Ohio on July 13, bears a map of the Northwest Territory and portraits.

On August 18 the Virginia Dare 5c stamp was released at Roanoke Island, N. C., in commemoration of the first white child born in America.

A miniature sheet honoring the SPA Convention was issued at Asheville, N. C. on Aug. 26th. This consists of a single copy of the 10c National Parks (Great Smoky) stamp, printed in green, in the center of the sheet.

Later this year the Territorial issue is expected. This will consist of four stamps, honoring Hawaii, Puerto Rico, the Virgin Islands and Alaska.

The DOMINICAN REPUBLIC has a new 10c Airpost stamp. Deep green and light green in color, it depicts a seaplane base.

An interesting commemorative

has been issued by FRANCE honoring the philosopher Descartes. The title page of his most famous book, "Discours de la Methode" is shown at the left of the panel, but in error the first stamps were engraved reading "Discours sur la Methode." Both varieties were issued and collectors should look for them.

Japan's General Nogi, who committed hari-kari when his emperor died in 1912, is shown on the new 2s red issue of JAPAN. Japanese collectors are displeased with this issue because the design is too Germanic or Scandinavian in type to suit them.

The 5c brown Mexican current issue showing the Tower of Los Remedios has been reissued in a smaller size.

British Coronation stamps, and new regular issues bearing the portrait of King George VI, are beginning to trickle in. Thanks to thoughtful overseas correspondents, RADEX has received mail franked with Coronations from New Zealand, Australia, Gt. Britain, Canada, Newfoundland and the Union of South Africa. All together, 45 of the Crown Colonies and 14 Dominions issued Coronation stamps.

Two dollar and \$5 values have been added to the current CHINA Airpost series for the trans-Pacific airmail service. The design shows a monoplane flying over the Great Wall.

Provisional issues from SPAIN are so numerous that the catalogers are even having difficulty keeping up with them and it is probable that a lot of these stamps will never be cataloged. Radio listeners should contact Spanish amateurs if possible, especially those in rebel territory, and try to get some of these interesting adhesives. We have a cover from Cadiz which we value very highly, despite the fact it is only tentatively recognized by the Scott Catalog.

## Cautions

Postage stamps are worthless if they are in damaged condition. If you intend to start a collection with the stamps you have already accumulated from your foreign mail, be careful not to damage them when removing them from the envelopes. Do not pull them off, and do not The only correct steam them off. way to remove them is to soak them in lukewarm water. A few minutes' soaking will separate the stamp from the envelope, and they will dry out quickly if laid out on a blotter. Before soaking, however, remove the part of the envelope which contains the address, as the ink may run and discolor the stamps.

Stamps should be mounted with stamp hinges (never pasted down in a book). Hinges can be purchased for 10c a thousand from most stationers or stamp dealers, but be



Ray Noble, whose suave strains captivated dancing America when he first arrived in the United States, came up from Cambridge to become one of England's smartest composers and arrangers.

sure the hinges you buy are the peelable kind. Suitable albums for your stamps are available at prices ranging from fifty cents to many dollars.

Two books are recommended to help collectors to classify their stamps. The United States government has published a booklet illustrating and describing all the United States stamps which sell for 25c a copy. Address the Superintendent of Documents, Washington, D. C.

The other book is the Scott Standard Postage Stamp Catalog, \$2.50 a copy from all book and stamp dealers. This book will cost \$3 a copy in 1938. The Scott Catalog illustrates, describes, and prices every stamp ever issued by all the countries in the world.

## **Correspondents Wanted**

"I am 16 years old and go to a radio-television school in Detroit. I would like to correspond with steady pen-pals from anywhere." Raymond Skidmore, 2311 Pasadena Ave., Detroit, Mich.

Jerome Roberts, 1573 Packard Ave., Racine, Wis., wishes corries. "I would like to exchange SQL cards and post cards with anyone in the world," Austin Roquemore, 119 E. Hazel Ave., Ponca City, Okla.

"I would like to meet a few of the local amateurs if possible and will be glad to have them call in person any evening." Wm. J. Wood, 817½ Lake St., Oak Park, Ill.

"I would like to hear from anyone using a Sky Buddy receiver. I SWL 100%. Especially would like to hear from YL's." Joe F. Szabat, 120 Clarion St., Oil City, Pa.

H. Wilcox, 623 W. 40th Place, Los Angeles, Calif., wishes to exchange SWL cards with anyone interested in the amateurs.

"I will be glad to exchange SWL

cards with anyone. I have been DXing for nearly two years with a Silvertone 7-tube 3-band set." Walton Knight, Belinda P.O., Acco County, Va.

Miss Anna Uster, 2310 Pasadena Ave., Detroit, Mich., who is 19 years old and works at radio station WJR, would like to correspond with RADEXers.

Gerald R. Hobbs, 4348 8th, N.E., Seattle, Wash., who counts 1209 stations in his log, desires to correspond.



"This is the way we do it at CBS," says Bob Gibson, page boy singer, as he adjusts the mike for his sister, Freddle, vocalist on "Your Hit Parade," heard over the Columbia on Saturdays. Bob's singing ambitions have already landed him sustaining spots on the same network.

The Broadcast Division of the FCC has directed that a modification of license be issued to KALB, Alexandria, La., to change the frequency from 1420 to 1210 kcs., and the hours from daytime only to unlimited, using 100 watts power.

# For SHORTWAVE Addicts

**T**HIS section of RADEX is completely written by our readers. It is a composite tabulation of all the reports received from shortwave fans, and every station mentioned herein was actually heard by someone who reads RADEX.

It is hoped that the system of classifying shortwave news by countries will meet with favor among our readers, but whether favorable or not, we shall be glad to have opinions. As these columns are prepared exclusively from information sent in by readers it naturally follows that the amount of information given depends upon the number of reports received. All s.w. listeners are urged to contribute.

From A. I. Breen of Dunedin, New Zealand comes information concerning a number of stations on the other side of the world. VPB in Colombo, Ceylon, he says, is still working on 6060 kes. with 300 watts power, although they continue to announce as 6160 kcs. The Secretary of the Penang Wireless Society, controlling ZHJ, writes that the government station at Rangoon, Burma, is testing on various frequencies in the 6 megacycle band, but so far no definite frequency has been decided upon. ZGD in Kuala Lampur, Malaya, was heard by Mr. Breen on a frequency near 13 megs. They were calling PLQ Bandoeng at the time. The S. S. "Awatea," ZMBJ, was heard frequently at 4 am. EST. on its 4.4 meg. frequency working with Wellington.

Broadcasts from 9MI, on the S. S. "Kanimbla" are radiated on the first Thursday of each month, and every Sunday and Wednesday, between the hours of 7 and 7:15 am.

## • • • Written by Themselves

Est. Each broadcast is sent to a different AWA station in Australia for rebroadcast. On Sept. 2 the transmission will be relayed to 2GN at Goulburn. On that day the ship will be between Mackey and Brisbane. 9MI transmits on 6.01 megs.

## Argentina

LRU has returned to the air, operating daily from 8 to 10 am. After a silence of a half hour the broadcasting is taken over by LRX, from 10:30 a.m. until 12:30 a.m. the following morning, EST. Both these stations are operated by "Radio el Mundo," Calle Maipu 555. Verification cards bear the letters LRI, which is the broadcast band station they relay.

## Australia

The new station, VK6ME, at Perth, is being heard more or less regularly on 9590 kcs. until 8 a.m. daily except Sundays. This station is owned by Amalgamated Wireless, (A/sia), Ltd.

VK2ME, 3ME and 3LR continue to come through on their regular schedules, as given in our indices. 3LR seems to be the best heard of the trio, with 3ME a close second.

## Austria

The Vienna experimental station OER2 on 11800 kcs. transmits from 1 a.m. to 5 p.m. on Mondays through Fridays, and until 6 p.m. on Saturdays. This 1.5 kw. station announces as "Radio Wien."

## Bolivia

According to a Bolivian amateur there are no s.w. broadcasting stations in Bolivia, but our South American representatives advises up that CP1, La Paz, transmits on 9800 kcs. and is frequently heard.

## **Bulgaria**

"Radio Sofia," that elusive Bulgarian shortwaver, has been reported on frequencies between 14920 and 14940 kcs. You will have to tune for this station in the afternoons as they sign off before 5 pm.

## Canada

CJRX, the 11 meg. transmitter of James Richardson & Sons, Winnipeg, use a vertical antenna for their 11 megacycle rig now, which probably accounts for the improved reception noticed in many parts of the country.

The Maritime Broadcasting Co., Ltd., operators of VE9HX at Halifax, announce that their 6130 kcs. station transmits from 6 to 12 p.m. daily except Saturday and Sunday.

CFRX of Rogers Batteryless, Toronto transmits on 6090 kcs. on weekdays from 7:45 a.m. to 5 p.m. on Saturdays from 11 a.m. to 5 p.m.

## Ceylon

The Globe Circlers DX Club states that VPB in Colombo transmits daily from 6:30 to 10 a.m. EST. on 6160. Mr. Breen advises us, however, that the correct frequency is 6060 kcs. The Broadcasting Office is located in Torrington Square, Colombo.

### China

A Chinese station so far unreported is XGOY at Kunming, which broadcasts on 7500 kcs., using 100 watts.

### Colombia

Cards from HJ1ABP state that this station relays HJ1ABP on 1400 kcs. The shortwave unit, known as "Radiodifusora Cartagena" employs 1000 watts power on 9600 kcs.

### Costa Rica

TIVL, San Jose, assigned 6700 kcs., has been heard on 6618.

Perry Girton, operating in the 20 meter amateur band, was heard to mention that he is building a broadcasting station to work in the 25meter band. Mr. Girton is the own-



"Charlie McCarthy" is telling Edgar Bergen about the trouble he had getting away from the bar last night without paying his bill. Bergen, radio's only ventriloquist, was first introduced by Rudy Vallee to radio. Prior to that he had traveled extensively here and abroad with his famous dummy.

er-operator of TIPG on 6.410 megs. Jerome Roberts of Racine, Wis. has a verification from TILS in San Jose which gives the frequency as 5800 kcs. and the address as Apartado 3.

#### Cuba

Emisoras Grau, owned by the Grau Brothers, Apartado 137, Santiago, say that their stations carry only the programs of the manufacturers of Baccardi Rum. Their stations are COKG on 6200 kcs. and CMKG on 1160 kcs. The studios are located at Sagarra, alta 26, and the transmitters at Loma de Quintero.

COCD, "La Voz del Aire," Box 2294, Havana, broadcasts daily from 7 a. m. to 1 a.m. on 6120 kcs.

A new Cuban is reported just as we are about to go to press. It is CO9BZ, Havana, announcing the frequency as 9070 kcs. The address was given as Box 866.

## Curacao

It is reported that the name of this Dutch possession will be changed to Nederlandsche Antillen (Netherland Antilles.)

## Czechoslovakia

The present transmitting schedule of the Prague shortwave station is outlined herewith:

- Trans. I, daily 2 to 2:15 p.m., EST., OLR5A, 15230 kcs. (news in Czech).
- Trans. Ia, Monday and Thursday from 7 to 9:10 p.m., OLR4A, 11840 kcs. (news and music).
- Trans. II, daily 9:25 to 11:20 a.m., OLR5A, 15230 kcs. (for the Orient).
- Trans. III, daily 2:30 to 4:30 p.m., OLR4A, 11840 kcs. (for Europe and Africa).

## Dominican Republic

HI3U, La Voz del Comercio, Santiago, according to Director Moises Franco y Franco, has three programs every day; one from 7:30 to 9:30 a.m., another from noon to 2:30 p.m. and the third from 5 to 7:30 p.m. On Monday nights from 8 to 9 p.m. a Scientific-Cultural Hour is presented. Recordings are never used, and music is always the typical music of the Dominican people. HI3U transmits on 6015 kcs.

HI2X in Trujillo City, on 11960 kcs., operates daily except Sundays from 8:10 to 10:10 p.m., EST.

HIL, Trujillo, 6500 kcs is heard between 6 and 8 p.m. HI2D, "La Voz Catolica," Trujillo, is heard on 6900 kcs. HI3C in La Romana is reported on 6730 kcs. in the early evening.

## **Federated Malay States**

The Globe Circulers DX Club states that ZGE in Kuala Lampur is heard on 6130 kcs. on Sundays, Tuesday and Fridays from 6:40 to 8:40 a.m. Est.

## Fiji Islands

VPD2 continues to transmit daily except Sundays from 5:30 to 7 a.m. on 9540 kcs. This station is owned by Amalgamated Wireless, (A/sia), Ltd.

## Hong Kong

R. P. Morris, Secretary of the Hong Kong Broadcasting Committee, P. O. Box 200, gives the frequency of station ZBW as 9525 kcs. Other frequencies assigned to this station 'are 6090, 15190, and 15755 kcs. The choice of frequencies is made according to conditions prevailing. Programs are transmitted from 11:30 p.m. to 1 a.m.; 4 to 10 a.m., on weekdays, and on Saturdays from 9 p.m. to 1 a.m. Sunday. Sundays they can be heard between 3 and 9:30 a.m.

ZBW, it is understood, no longer verifies reports, but Stanley La Rue, 309 So. Bedford Drive, Beverly Hills, Calif., has arranged to monitor their transmissions and will verify reports for a small fee. Those interested are asked to get in touch with Mr. La Rue.

## Hungary

The schedule of HAT4 is now 7 to 8 p.m. Sundays and Wednesdays, and 6 to 7 p.m. on Saturdays. HAT4, Budapest, uses the 9125 kcs. frequency.

## Japan

Transmissions to the eastern part of the United States from the Japanese shortwave stations now commence at 4:30 p.m. EST., while the broadcast for the west coast starts at 12.30 a.m. The transmitters have also been changed. Eastern USA programs are radiated over JZK on 15160 kcs. and JZJ on 11800 kcs., while JZK is used for the west coast programs.

JVT, 6750 kcs., has been reported at 6 a.m. JVM, 10740 kcs., transmits the European programs 2:30 to 3:30 p.m. JVH on 14640 is heard between 4 and 5 pm.

## Kenya

VQG, Nairobi, on 19620, 'phones GAD London every day from 7 to 8 a.m. EST.

## Martinique

The schedule of the Martinque station, "Radio Fort de France," is 11 to 12 a.m. and 5:15 to 6:15 p.m., EST. daily. 9450 kcs. is the frequency.

## Mexico

,XETM, Villahermosa, Tabasco, is heard on 11525 but announces as 11730, and XEWB, Guadalajara, Jal., is heard on 11370 while announcing as 11710.

XEYU, National University of Mexico, claims to be on 9600 kcs. but it is actually a little higher in frequency. It works from 7 to 10 p.m. nightly.

Overdue verifications are now coming in from XEPW. Their correct address is Carpio 137 altos, Mexico City. They broadcast on 6110 kcs. during the late evening hours and relay the programs of XEJW.

XEXA, Mexico City, works on 11880 daily except Sundays from 8 to 11:30 a.m., 3 to 5 p.m. and 6 to 11 p.m. EST.

The operators of stations XED and XEDQ Guadalajara, have been making tests and corrections in an attempt to stabilize the frequency of their s.w. station. XEDQ has been frequently reported on 9510 but the correct freq. is 9520. This station, which commenced broadcasting on Jan. 1st of this year, transmits on 1160 kcs. (XED) with 10 kw. and on 9520 kcs. (XEDQ) with 500 watts.

## **Netherlands East Indies**

Some of the shortwave broadcasting stations of the *NIROM* operate on frequencies which are not suitable for reception in North America. A list of these stations is given here for reference, however, and dialers who are interested should preserve this list as it will not be repeated.

YDA2, Batavia-Centrum, 2385 kcs., 150 w.

YDA3, Buitenzorg, 1640 kcs., 25 w. YDA4, Soekaboemi, 1550 kcs. 25 w. YDA5, Bandoeng, 2500 kcs. 75 w. YDA6, Cheribon, 2870 kcs., 15 w. YDA7, Pekalongan, 3270 kcs., 15 w. YDB2, Semarang, 2450 kcs., 150 w. YDB3, Djokja, 1660 kcs., 100 w.

YDB4, Tjepoe, 1615 kcs., 25 w.

YDB5, Solo, 1595 kcs., 25 w.

YDB6, Malang, 1570 kcs., 100 w.

YDB7, Sourabaya, 111, 1530 kcs., 75 w.

\*YDD2, Bandoeng, 1630 kcs., 25 w. \*YDD3, Batavia-Centrum, 1585 kcs., 50 w.

\*YDE3, Semarang, 2710 kcs., 15 w. \*YDE4, Sourabaya, 2415 kcs., 75 w.

\*YDE5, Djokja, 2350 kcs., 25 w.

\*Broadcast native music (Javanese).

The balance of the *NIROM* stations are shown in our index.

The Javan station on 4.810 megs. is YDL2, owned and operated by Solosche Radio Vereeniging, Soerakarta, Solo. When the Nirom native programs are radiated the call YDE2 is used.

YDG3 on 4865, YDP3 on 4895 and YDA on 3040 kcs. are being heard consistently in New Zealand, and it is felt that, when cooler weather comes, they should be heard on this continent. These stations generally play American recordings.

A very strong Javan station has been heard near 9415 kcs. relaying PLP regularly.

## New Zealand

The Prime Minister of New Zealand, Mr. M. J. Savage, has suggested the erection of a shortwave broadcasting station there to transmit programs in several languages for the purpose of advertising the products and attractions of that Dominion.

Plans for this station, which will be of high power, are nearing completion, and it is expected the station will be on the air within the next twelve months.

## Panama

HP5I, "La Voz del Interior," Aguadulce, Panama, transmits on 11895 daily from 7:30 to 9:30 p.m. EST. HP5L is heard daily from 1 to 1:30 am EST broadcasting recordings and announcing in Spanish, and commencing at 1:30 it contacts Latin amateur stations. HP5L transmits on 11710 kcs.

A new Panamanian is HP5A, 11700 kcs., Panama City, transmitting between 8 and 10:30 pm, EST.

## Papua

A. C. Tarr of Seattle is the first to report reception of VK8XI at Port Moresby, Papua, on 6990 kcs.

## Peru

The correct call sign of "Radio Nacional" at Lima is OAX4T, according to information from Peru.

One new Peruvian is chronicled his month, OAX4M, "Radio Record," on about 29 meters with 155 watts on an irregular schedule. This station relays the programs of OAX4Q, 1470 kcs., 150 watts. The owners are Cortes & Cia., Huacho, Peru.

The frequency of OAX4J, Lima, has been shifted to 9330 kcs. from 9520. With a power of 200 watts, this station relays OAX4I, "La Voz de Lima." The postal address is Apartado 1166.

OAX4J is on the air from noon to 3 p.m. and from 5 p.m. to 1 a.m. daily.

OAX4H is owned by Radio Davila, Filipinas 554. OAX4C and OAX4D are owned by Difusora Universal, S. A. (Radio DUSA).

## Portugal

The studio address of CT1AA has been changed to Av. Antonio Augusto d'Aguiar 136. Their verification card states they work on Tuesday, Thursday and Saturday from 4 to 7 p.m. EST. on 9650 kcs. The power is 2 kilowatts. The three cuckoo calls easily identify the station, as well as the slogan, "Radio Colonial."

## Southern Rhodesia

ZEC in Salisbury operates on 5800 kcs. Sunday from 3 to 5 a.m., and on Tuesdays and Fridays from

## 1:15 to 3:15 p.m. EST.

## Siam

HS8PJ is operating on 9350 kcs. exclusively now. The schedule is Mondays and Thursday from 8 to 10 a.m. EST. Reports are to be addressed to the Post and Telegraph Dept., Bangkok.

## Spain

A number of stations have been logged which have no call letters, and in some cases even their locations are not known. We are listing them under "Spain" because their broadcasts consist of propaganda about that country, although it is believed that some of the stations are in Italy or France.

"Radio Requete" has been heard working east coast USA amateurs between the hours of 6 p.m. and midnight. This station is heard on the lo-frequency end of the 20meter band.

Another station has been heard on 7250 kcs., announcing also as "Radio Requete," and giving its location as San Sebastian, Spain.

The "Italian Communistic Station," giving a Paris address, was located and destroyed by French authorities, but another has popped up to take its place. It works on 10620 kcs. at various hours during the day, but gives no call letters nor location.

"Radio Libertad," believed to be in Milan, Italy, another Communistic station, has been heard on 7380, 7400, and 9520 kcs.

The frequency of EAR (formerly EAQ2) was announced over the air as 9510 kcs., and the power as 20 kw. The slogan "The Voice of Madrid" was heard, and the address was given as Box 951. This is the old EAQ with only new call letters and new frequency.

## Spanish Morocco

"Radio Guardia Civil" is now working on 6508 kcs. from 7 to 8 p.m. EST.

## Switzerland

The Secretariat of the League of Nations transmits League programs on stations HBP and HBL, 7797 and 9595 kcs. respectively, on Saturday afternoons from 5:30 to 6:30 p.m. Mr. Michael Barkway requests that reports on these programs be addressed to him, Office of the Secretary-General, League of Nations, Geneva.

Programs arranged by the government of Switzerland for Swiss residents abroad are transmitted on Saturdays from 6:45 to 8 p.m. EST. on station HBJ, 14535 kcs., and HBO, 11402 kcs.

HB9BG, operating on 7294 kcs., broadcasts musical selections with announcements in German, English, French and Italian every Friday from 4 to 5 p.m.

## USSR

The September schedule of the Moscow stations is given in our s.w. index. Three frequencies will be in use during September, RNE on 12000 kcs., RAN on 9595 and RKI on 15040 kcs. Reports on these broadcasts are to be sent to Radio Centre, Solianka 12, Moscow.

## **United States**

Regular daily program service, especially designed for listeners of Europe and the British Isles, is now maintained by the CBS new high power international shortwave broadcast transmitter.

The new station, with a peak power of 40 kw., employs directional antennas pointing towards Europe, and the schedules enable European audiences to hear programs during their afternoon and evening hours. The schedule follows:

- 6120 kcs., for South and Central America, not used at present.
- 11830 kcs., for South America, 7 p.m. to midnight, EST. daily.

15270 kcs., for Europe, 1 to 4 p.m.



Airing the family's troubles is the business of Sedley Brown and Allie Lowe Miles, conductors of the NBC forum, Husbands and Wives. In their programs they question men and women on problems ranging from whether in-laws should live with young married people, to how to keep a husband from gambling away the family purse.

> EST. Sunday only. for Europe, 3 to 6 p.m. EST., daily exc. Sunday for South America, 5 to 6 p.m. EST., Sunday only.

- 17760 kcs., for Europe, not used at present.
- 21520 kcs., for Europe, 7:30 to 10 a.m. EST., daily except Sunday.

for Europe, 8 to 10 a.m. EST., Sunday only.

The General Electric Co. shortwave station W2AXF at Schenectady, N. Y. was granted a Construction Permit to increase power to 100 kw., and to erect an aerial array directional towards South America and Europe.

WNYF of the New York Fire Dept. is now on the air on 1630 kcs., and serves as a two-way telephone communication between nine fireboats and fire department headquarters. Ultra high frequency station W1XDT, owned by the City of Manchester, N. H. Police Dept., works on frequencies of 30100, 33100 and 40100 kcs., unlimited time. The transmitter is located at 351 Chestnut St. Two way communication is maintained with six police cars. This UHF station has been heard in England, on the west coast, and commonly in central USA.

## Venezuela

Sr. Jose A. Higuera M., owner of "Radio Popular," Maracaibo, advises us that his shortwave rig YV1RL works on 5930 kcs. and relays the entertainment of YV1RK on 1250 kcs. The power and schedule is not given, but the address is Apartado 247.

YV5RJ works on 6250 in the late evening hours with announcements in English. The sked is approximately 7 to 10 p.m.

## Choosing a Set

(Continued from Page 7) and selectivity. A twelfth tube for automatic volume control would be an added feature. And yet such a set would hardly please the ears of a music lover, since little attention was paid to the audio stages.

Another twelve-tube set could have three or four tubes in the a.f. stages, a cathode ray "Magic Eye," a pair of rectifiers, perhaps a ballast tube, and be a fine job for the quality of its reproduction. Yet, because it had but two i.f. stages and no r.f. at all, it would have little to recommend it the DXer who wanted sensitivity and selectivity.

Only recently attention was called to a ten-tube set which sells for twenty dollars. If one considered the number of tubes, this should be a fine performer and a real bargain. However, inspection showed that there were two rectifier tubes and three ballast tubes, so the purchaser could expect only "six-tube performance."

Therefore, the customer should investigate the functions of the tubes in the models which he is considering. If he wants real quality of reproduction, he should be sure that the audio stages have received proper attention. If he wants sensitivity and selectivity, he should see that the set has sufficient r.f. and i.f. stages. If he wants all three qualities, the receiver needs additional tubes.

## What's In A Name?

As one final consideration, Mr. Average Listener should pay attention to the name and reputation of the manufacturer. As a general rule, it is well to stick close to familiar advertised models.

The smaller, unknown companies seldom are able to turn out sets which are as well designed and engineered as those marketed by the familiar organizations. Their production facilities probably aren't as good, while their help is less experienced. Testing and tuning-up before shipment is less exact, less careful.

Parts and receivers may look pretty much alike, but standard products usually work better and last longer. Frequently inexpert construction leads to danger of electrical shock and even fire hazard. Replacement parts for unknown brands are always difficult to find, while service charges are higher when circuit diagrams cannot be obtained.

There is a definite "pride of ownership" in a fine receiver with a famous name on the dial. This becomes more important when the time comes for a trade-in and the standard product receives an allowance greater than could be made for an unknown brand.

Prospective purchasers may be

able to use some of these points to advantage and select a better receiver. For those who like to be guided still further, it is planned to publish from time to time performance reports on prominent models.

## A DX Competition

The Globe Radio DXer's Association of Australia has begun a series of competitions for both the shortwave and broadcast band DXers of United States and Canada. The contest is for the reception of Australian stations only.

The winning trophy is an inscribed silver map of Australia mounted on Australian polished timber, and a special trophy will be awarded to each section for the most outstanding single verification.

Membership in this organization is \$1.00 for Life Membership. Further particulars can be obtained from Leo Herz, 730 Roscoe St., Chicago, Ill., Wm. Ansell, 168 Wascana St., Regina, Sask., Canada, or from the Secretary, Arthur H. Preece, 61 Lipson St., Pt. Adelaide, S. A. Australia.

## **News Programs for South America**

Inauguration of two new series of Press Radio News broadcasts to South America over station W3XAL, Bound Brook, N. J., was announced by the National Broadcasting Co. Both series are heard daily except Sundays.

One of the programs, directed especially to Brazil, is broadcast from 6:15 to 6:30 EST. Press Radio News reports are given in \*Portuguese by Pinto Tameirao, a Brazilian who was recently added to the NBC staff.

The other broadcast is heard in Spanish from 6:00 to 6:15 pm. EST, announced by Martin Viale of Argentina.

# GOSSIPING about the Stars



Versatile is the word for Elinor Harriot. She's that small crowd of women characters that is invading the Amos 'n' Andy program. The voices of Mrs. Amos Jones, Arbadella and Mrs. Kingfish are in her repertoire on this famous program.

**F**ERDE GROFE started his musical career by playing the piano at the age of five. At 16 he composed a march, and before he was 20 he was viola player in the Los Angeles Symphony Orchestra. In San Francisco he met Paul Whiteman, then almost unknown. Became Whiteman's pianist and arranger in 1919, continuing with him until 1933. His arrangement of Gershwin's "Rhapsody in Blue" contributed to the fame of Grofe. Whiteman and Gershwin.

ROBERT L. RIPLEY turned to drawing cartoons after a broken arm spoiled his chance to develop a career as a pitcher in big league



Bob Hope, Cleveland boy who made good, has introduced several "Honeychiles" to radio, only to have them taken away from him by the screen or the stage. He is taking no chances with his latest "Honeychile", but has signed her for a long-term contract. The daughter of a South Carolina newspaper editor, "Honeychile" was active in college dramatics and has done modeling in New York.

baseball. He did, however, pitch his first major league game for the New York Giants.

EDDIE CANTOR made his debut as the star of his own radio show in 1931, following a guest appearance with Rudy Vallee which established him as a microphone favorite. He introduced a new informality which endeared him to the listening audience. He was the first comedian to kid the sponsors, was the first to give the orchestra leader lines to speak, and was the first to give the announcer an active part in the show.

Many prominent entertainers owe their present radio eminence to Eddie Cantor's knack for spotting talent. Through his encouragement and guidance RUBINOFF became, instead of just another orchestra leader, a definite ether personality. JIMMY WALLINGTON traces his top ranking radio position to his first meeting with Cantor in 1931. In rapid succession Gracie Allen, Parkyakarkus, Bobby Breen, Deanna Durbin and more recently, Saymore Saymore made their bigtime radio debuts on his Sunday night broadcasts.

## Who's Who on "Watch the Fun Go By"

AL PEARCE: A big, friendly Westerner, and a jovial entertainer who has used his experience as a farmer, roofing and diamond salesman and musician as a background for the human down-to-earth type of entertainment he presents. Eight years ago he entered radio because the depression wiped out his real estate earnings. His start was modest, but sponsors took notice soon. Born in San Jose, Calif., July 25, 1908. Married. Likes to fish and hunt.

ARLENE HARRIS: The "Human Chatterbox" started her rapid fire monologues at home to amuse husband and friends. It was a diversion to the doctor-husband after a hard day at the hospital. Later she tried an audition at a Los Angeles radio station in 1932, and clicked. Guest appearance with the "Gang" led to a permanent engagement. Prior to that she had worked in vaudeville and stock. Born in Canada and educated in Canada and England. Fond of rummy, poker and bridge.

BILL COMSTOCK: "Tizzie Lish," radio's female impersonator and purveyor of impossible recipes, began his entertainment career as a drummer in vaudeville pits. Later he built comedy acts around his high-pitched voice, and the fame of "Tizzie" soon spread. Born and educated at Syracuse, N. Y., where he attended the University. He is just past forty.

NICK LUCAS: "Singing The Troubador" is a comparative recent addition to the "Gang," but was a successful radio veteran in his own right. First went on the air from Chicago in 1922. Later on, a recording company scout heard him and he was soon known all over the country. Engagements in London's Cafe de Paris and Kit Kat Club soon were followed by Broadway musical comedy roles and prominent parts in such elaborate motion picture productions as the original "Gold Diggers of Broadway." Born in Newark, N. J., August 22, 1897.

BILL WRIGHT: The "Eb" of the "Eb and Zeb" acts, has been with Al Pearce on and off for seven years. Al plays the part of Zeb.

IF

IF Robert Ripley can find time to visit about 40 more countries, he will have been in every country known to the world, since he already has visited 178.

IF Gracie Allen hadn't gone to Union Hill, N. J., to watch a girl friend try out a new act, she might never have met the front half of the song and dance act headlining there, known as "George Burns and Billy Lorraine."

IF Morton Downey, who had tried about 20 different jobs and liked none, hadn't been coaxed by a friend to sing in Brooklyn at an Elk's banquet, he says it never would have occurred to him to sing for a living—he thought singing was "just for fun."

IF business had not been too slow, as he says, Arthur Godfrey, radio announcer and commentator, might still be in Chicago selling cemetery lots.

## Once Upon a Time

PHIL SPITALNY, aged ten, tried teaching piano lessons to two other boys with whom he had grown up

in Odessa, Russia. He was studying with a grown-up teacher—and he kept just one lesson ahead of his own pupils.

AL JOLSON introduced the song which became the first outstanding hit-song of George Gershwin— "Swanee."

EDDIE CANTOR acted as foil for the Great Arthur & Bedini, whose juggling act was then a nation-wide sensation in the vaudeville circuits.

MORTON DOWNEY once sent an unkempt stage-hand as his "personal manager" to fool a backstage caller. The visitor stormed out, taking with him a bona-fide offer to sing at a banquet, with a fee of \$1200.

The Vass Family has been signed to appear with Ben Bernie for a period of thirteen weeks. The sponsor was well pleased with their trial appearance on this show and the contract was their award.

Amos 'n' Andy have signed with Campbell Soup to do their broadcast for three years, commencing Monday, Jan. 3, 1938. There will be no change in the story, the hours or the stations, except some Canadian stations will be added to the chain.

For people who want to talk on the Husbands and Wives program and don't want friend wife or husband to guess their identity, Sedley Brown has collaborated with radio engineers on a "Voice disguiser." It has already been used several times with success-nobody recognized the voice. And now Brown keeps it in reserve for use whenan embarrassing question ever like "How can a husband cure a nagging wife?" comes up. The disguiser introduces several filters into the microphone circuit which take certain tones out of the voice and alter its quality completely.

## DX Club

## (Continued from Page 26)

in a week a chap in France will be pouring over it with the aid of a dictionary. Within a month a fellow in New Zealand will be sitting down in the summer evening to enjoy it.

But not many will realize that there is, and must be, such a place as the basement of 345 Maple Ave., and such men as Stansfield and the Hoppenstedts. Not many will realize that somewhere, in some room devoted to DX, someone devoted to DX has lost his sleep and a little more of his hair, for their sake. Someone has to run a club.

Along about dawn the light in the basement will go out, and the four men will trudge off to bed, or to work. There'll be a smudge of mimeograph ink on a shirt in front of the furnace.

Yes, that's what a DX club is.

## **Radio Problems**

## (Continued from Page 31)

horizontal or doublet antenna. The single conductor is erected vertically with its leadin taken off the bottom. The length of the lead plus that of the antenna gives the total effective length of antenna that can be used. The top should be at least 30 feet or more above the earth. It picks up signals equally as well from all directions, and when used as a radiator it transmits to all directions of the compass with uniform intensity.

## The New Tubes

Please tell me something about the tubes having Octal bases. It seems that some are glass, some metal, and others I do not quite understand how they are constructed. The octal base means that the base is fitted with eight contacts. Two of these contacts are for the heater or filament wires, one for the cathode, one for the plate, one for the shell to be grounded, and the balance for the various grid or plate connections within the tubes. These sockets will take any of the newer metal or corresponding glass tubes.

The metal tubes have a sealed metal shell. While the tube has many good features there are some who believe that they still are experimental since metal is slightly porous and is apt to permit air to be slowly admitted through it and the welded seams, and fill the vacuum within. Then there are glass tubes that are interchangeable with the metal tubes, and these are generally designated "G" after the type number. And some of these glass tubes are similar to the older glass tubes. We find that type 6K7G, for instance, is a type 78 tube fitted with the octal base. Or a 6A8G is merely a type 6A7 with octal base. In some cases a metal shield or glove can be slipped down over the glass tube and it becomes similar to an all-metal tube, such as the 6K7 or the 6A8, respectively. The metalglass tubes, with these metallic gloves, are designated with the same type number as the metal tubes, except the letters MG are added to the type number. There are some cases where glass tubes, metal tubes, and metal-glass tubes, are all similar, and similar to the same type of old glass tube. This is noticed in the old type 75, for instance. Its interchangeable or corresponding tubes in the octal bases are: 6F5G (glass), 6F5MG (metal-glass), and 6F5 (metal). The type 42 has equivalents in types 6F6G, 6F6MG, and 6F6. Type 80 rectifier is similar to types 5Y3 (glass) and 5Z4MG (metal-glass), but there is no metal equivalent.

## Scrapbook

## (Continued from Page 23)

On all foreign reception, planned tuning brings the best results. If, for example, the DXer gets up early some cool November morning and decided for a try at the TP's, he should study a station list and pick out a few of the more powerful sta-He will then dial the fretions. quency of one of them and stick around awhile. If a signal is heard immediately. he is very lucky. Usually, the station will be in the middle of a fade-out, so he will have to wait for the signal to pick up strength. Thus, if he had tuned away when at first he had heard no signal, he would have missed the station entirely.

If he is able to log the first station attempted, he can go on to another powerful transmitter and follow the same procedure. If it should develop that the larger stations are coming in at all well, he can refer to the log and try a few of the less powerful broadcasters. But in every case, the wise DXer will try for a *definite station on a definite frequency*. And he will stay on that frequency several minutes to allow for a possible period of fading.

South Dialing European and American stations in the early evening requires the same general procedure, only this type of tuning must allow for fading on the part of the interfering station as well as the one which is being sought. Reports in RADEX and in the various club bulletins tell which of these stations are being heard in various parts of the country, so the DXer will know where to try. And again the important idea is to try for specific stations on definite frequencies.

## **DX** Notes

(Continued from Page 15) many different conditions in one house and in a few minutes of time, might it not be possible to have DXers in different locations, using different equipment, actually hear what they report?"

It is admitted that Readers Foerster and Oxrieder have struck a vital point in the matter of varying reports. It is impossible to deny that receivers, aerials and locations play an important part in the manner in which any station is received. It is granted that the five listeners in question probably reported KVI exactly as they heard it.

But even when conceding that the KVI incident may have been unduly stressed, it is impossible to overlook the fact that many DXers are notoriously poor reporters. There are too many letters of protest from stations to ignore the fundamental necessity of submitting a clear and accurate report of reception. Whether the listener is careless, ignorant or is attempting to wheedle a veri by means of undeserved compliments, he should remember that the station deserves and expects an honest report.

And in passing, one cannot overlook the very nature of the arguments put forth. If different receivers, aerials and locations can make so much difference in the way a given station is received, that may be the reason why some listeners have outstanding DX records and others complain about poor reception conditions, sunspots and the like.

WMBS on 1420 kcs., Uniontown, Pa., has completed its tests and will soon be on the air, we are informed by Erick R. Johnson, Perth Amboy, N. J. This new station will verify all correct reports if a three cent stamp is enclosed, otherwise no verification can be expected.

## WHAT'S ON THE AIR TONIGHT

Fill in the calls and frequencies of the stations through which you best receive the network programs. You can then turn quickly to the one that has the feature you want,

Network	Stations
Canadian (CBC)	
Columbia (C)	
Mutual (M)	
National Red (R)	
National Blue (B)	

Time: ED Eastern Daylight; E Eastern; C Central; M Mountain.

For Pacific Time subtract one hour from Mountain.

Due to change to Daylight Saving Time on April 25, some of the stations will be unable to carry particular features.

#### MONDAY

ED-6:35 p.m., E-5:35, C-4:35, M-3:35 C - Basebail Resume

KFH KGKO KLRA KMBC KNOW KOMA KRLD KRNT KSCJ KTRH KTSA KTUL WABC WACO WADC WAIM WALA WBBM WBIG WBNS WBRC WBT WCAU WCHS WCOA WCOC WDAE WDBJ WDBO WDNC WDOD WDRC WEEI WFAM WFBM WFEA WGBI WGH WGST WHIO WHP WIBX WJAS WJNO WJR WJSV WKBB WKBH WKBW WKRC WMAS WMAZ WMMN WNAX WIAC WMBD WMBD WNOX WOC WORC WPAR WPRO WQAM WREC WRVA WSFA WSJS

#### ED-6:45 p.m., E-5:45, C-4:45, M-3:45 Lowell Thomas

CRCT KDKA WBAL WBZ WBZA WFLA WIOD WJAX WJZ WLW WMAL WOOD WRVA WSYR WTAM WYYZ

## ED-7:00 p.m., E-6:00, C-5:00, M-4:00 C — Poetic Melodies; Jack Fulton WABC WADC WBT WCAO WCAU WDRC WEAN WEEI WFBL WGR WHEC WHK WJAS WJR WJSV WKRC WOKO WSPD WTOC WWVA

R — Amos 'n' Andv

ų,

KYW WBEN WCAE WCSH WEAF WEEI WFBR WGY WJAR WLW WRC WTAG WTIC

ED-7:15 p.m., E-6:15, C-5:15, M-4:15 R -- Uncle Ezra's Radio Station

KARK KFYR KGBX KGNC KPRC KSTP KTBS KTHS KVOO KYW WBAP WBEN WCAE WCKY WCOL WCSH WDAF WDAY WEAF WEBC WFAA WFBR WGBF WGY WHO WIBA WIRE WJAR WKY WMAQ WNAC WOAI WOOD WOW WRC WTAG WTAM WTIC WTMJ

ED-7:30 p.m., E-6:30, C-5:30, M-4:30 B - Lum and Abner

WBZ WBZA WENR WJZ WLW WMC WSM WSYR

#### ED-7:45 p.m., E-6:45, C-5:45, M-4:45 C - Boake Carter

KMBC KMOX KOMA KRLD WABC WBBM WBT WCAU WCCO WDRC WEAN WFBL WGR WHAS WHK WJAS WJR WJSV WKRC WNAC

#### ED-8:00 p.m., E-7:00, C-6:00, M-5:00 C - Horace Heidt and Orchestra

KDB KERN KFAB KFBK KFH KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KRLD KRNT KSL KTRH KTSA KOL KTUL KVI KWG WABC WBBM WBRC WBT WCAO WCAU WCCO WDRC WFBL WFBM WGR WGST WHAS WHK WJAS WJR WJSV WJSV WKRC WLAC WMBR WNAC WNAX WOKO WREC WWL

#### R. - Burns and Allen

CRCT KYW WBEN WCAE WCSC WCSH WEAF WFBR WFLA WGY WHO WIOD WIRE WIS WJAR WJAX WLW WMAQ WNAC WPTH WJAR WRC WRVA WSOC WTAG WTAM WTAR WTIC WWJ

ED-8:30 p.m., E-7:30, C-6:30, M-5:30 C — Pick and Pat KFAB KMBC WABC WADC WBBM

WBT WCAO WCAU WDRC WEAN WFBL WGR WGST WHEC WHK WHP WICC WJAS WJR WJSV WKRC WLBZ WMAS WNAC WOKO WORC WSPD

#### **R** — Voice of Firestone

CFCF CRCT KFYR KPRC KSD KSTP KTBS KVOO KYW WAVE WBEN WCAE WCSC WCSH WDAF WDAY WEAF WEBC WEEI WFAA WFBR WFLA WGY WHO WIOD WIRE WIS WJAR WFBC WIBA WJAX WJDX WKY WMAQ WMC WOAI WOW WPTF WRC WRVA WSB WSM WSMB WSOC WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

#### ED-9:00 p.m., E-8:00, C-7:00, M-6:00 R --- Fibber McGee and Molly

KFYR KPRC KSD KSTP KTBS KVOO KYW WAVE WBEN WCAE WCOL WCSH WDAF WDAY WEAF WEBC WFAA WFBR WFLA WGY WHO WIBA WIOD WIRE WIS WJAR WJAX WJDX WLW WMAQ WMC WNAC WOAI WOOD WOW WPTF WRC WSB WSM WSMB WSOC WSUN WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

ED-9:30 p.m., E-8:30, C-7:30, M-6:30 **R**—Phil Spitalny's Girl Orchestra CFCF CRCT KDYL KFI KGHL

KGIR KGO KGW KHQ KOA KOMO KPRC KSD KSTP KVOO KYW WAVE WBEN WCAE WCSH WDAF WEAF WFAA WFBR WFLA WGY WHO WIBA WIOD WIRE WIS WJAR WJAX WKY WLW WMAQ WMC WNAC WOAI WOW WPTF WRC WRVA WSB WSM WSMB WTAG WTAM WTAR WTIC WTMJ ww i

#### ED-10:00 p.m., E-9:00, C-8:00, M-7:00 **R** — Contented Program

CFCF CRCT KDYL KFI KGW KHQ KOA KOMO KPO KPRC KSD KYW WBEN WCAE WCSH WDAF WEAF WEEI WFBR WFLA WGY WHO WIOD WIS WJAR WJAX WKY WMAQ WMC WOAI WOW WPTF WRC WRVA WSB WSM WTAG WTAM WTAR WTIC WWJ WWNC

#### с. Wayne King and Orchestra

KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KRNT KSL KVI KWG WAAB WABC WADC WBBM WBNS WBT WCAO WCAU WCCO WDRC WEAN WFBL WFBM WHAS WHK WIBW WJAS WJR WJSV WKBW WKRC WOKO WSPD WWL

#### ED-10:30 p.m., E:9:30, C-8:30, M-7:30 R - Burns and Allen

KARK KDYL KFBK KFI KFYR KFBX KGHL KGIR KGNC KGO KGW KHQ KMJ KOA KOMO KPO KPRC KSD KSTP KTAR KTBS KVOO KWG WAVE WDAF WDAY WDAY WEBC WFAA WIBA WJDX WKY WMC WOAI WOW WSB WSMB WTMJ

#### ED-11:00 p.m., E-10:00, C-9:00, M-8:00 C — Poetic Melodies; Jack Fulton KERN KFAB KFBK KFPY KFRC KGB KHJ KLRA KLZ KMBC KMOX KOIN KOL KOMA KRLD KRNT KSL KTRH KTSA KVI WBBM WBRC WCCO WFBM WGST WLAC WREC WWL

#### R Amos 'n' Andy

KDYL KFI KGW KHQ KOA KOMO KPO KPRC KSD WBAP WDAF WHO WKY WLW WMC WOAI WOW WSB WSM WSMB WTAM WWJ

## MONDAY (Continued)

ED-11:15 p.m., E-10:15, C-9:15, M-8:15 C — Boake Carter KFPY KLZ KNX KOIN KOL KSFO

KSL KVI

ED-11:30 p.m., E-10:30, C-9:30, M-8:30 - Pick and Pat

KFPY KGKO KLRA KLZ KMOX KNX KOIN KOL KOMA KRLD KRNT KSCJ KSFO KSL KTUL KVI KWKH WACO WBRC WCCO WFBM WHAS WLAC WREC

## TUESDAY

ED-6:35 p.m., E-5:35, C-4:35, M-3:35 C — Basebali Resume, See Monday

ED-6:45 p.m., E-5:45, C-4:45, M-3:45 B — Lowell Thomas, See Monday

ED-7:00 p.m., E-6:00, C-5:00, M-4:00 - Poetic Melodies, See Monday c Amos 'n' Andy, See Monday R.

Easy Aces R-

KDKA KDYL KFI KGW KHQ KOA KOIL KOMO KPO KSO KWK WBAL WBZ WBZA WCKY WENR WFIL WGAR WHAM WHIO WIRE WJZ WMAL WMT WSYR WXYZ

ED-7:30 p.m., E-6:30, C-5:30, M-4:30 B — Lum and Abner, See Monday

ED-8:00 p.m., E-7:00, C-6:00, M-5:00

C — Mark Warnow Orchestra CFRB KFAB KFH KFPY KGVO KLRA KLZ KMBC KMOX KNOW KOIN KOL KOMA KRLD KRNT KSCJ KSFO KSL KTRH KTSA KTUL KVI WABC WADC WBBM WBNS WBRC WBT WCAO KNX WCAU WDAE WDBJ WDNC WDRC WEEI WFBL WFBM WGR WGST WHAS WHEC WHK WIBX WJAS WJR WJSV WKRC WLBZ WNAX WOKO WORC WPRO WQAM WREC WWL

R --- Johnny with Russ Morgan

KFYR KPRC KSD KSTP KTBS KTHS KVOO KYW WAVE WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WFBR WFLA WGY WIOD WIS WJAR WHO WIBA WIG WIDA WIDD WIS WJAR WJAX WJDX WKY WI.W WMAQ WMC WNAC WOW WPTF WRC WRVA WSB WSM WSMB WSOC WSUN WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

B — Husbands and Wives KDKA KECA KEX KFSD KGA KGO KJR KLO KOIL KSO KVOD KWK WABY WBAL WBZ WBZA WCKY WEAN WEBR WFIL WGAR WHAM WICC WJZ WLS WMAL WMT WREN WSYR WXYZ

ED-8:30 p.m., E-7:30, C-6:30, M-5:30 R — Wayne King and Orchestra KFYR KPRC KSD KSTP KTBS KVOO KYW WAVE WBAP WBEN WCAE WCKY WCSH WDAF WDAY WEAF WEBC WEEI WFBR WGY WHO WHIO WIBA WIRE WJAR WJDX WKY WMAQ WMC WOAI WOW WRC WSB WSM WSMB WTAG WTAM WTIC WTMJ WWJ

B --- Edgar Guest, It Can Be Done KDKA KOIL KSO KWK WBAL WBZ WBZA WFIL WGAR WHAM WJZ WLS WLW WMAL WMT WREN WSYR WXYZ

ED-9:00 p.m., E-8:00, C-7:00, M-6:00 C - Al Pearce and Gang

CFRB CKAC KFAB KFH KGKO KLRA KMBC KMOX KOMA KRLD KRNT KSCJ KTRH KTSA KTUL KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDNC WDOD WDRC WEAN WFBL WFBM WFEA WGST WHAS WHEC WHK WHP WIBW WIBX WICC WISN WJAS WJR WJSV WKRC WKBH WKBN WKBW WLAC WLBZ WMAS WMBD WMBG WMBR WMMN WNAC WNAX WNBF WNOX WOC WOKO WORC WOWO WPG WQAM WREC WSBT WSFA WSJS WSPD WTOC WWL

R — Vox Pop; Sidewalk Interviews KSD KYW WBEN WCAE WCKY WCSH WDAF WEAF WEEI WFBR WGY WHO WIRE WJAR WMAQ WOW WRC WTAG WTAM WTIC ww.

B — Ben Bernie and Orchestra KDKA KDYL KFI KFSD KFYR KGW KHQ KOA KOIL KOMO KPO KPRC KSO KSTP KTAR KTBS KVOO KWK WAVE WBAL WBAP WBZ WBZA WDAY WEBC WFIL WFLA WGAR WHAM WIBA WIOD WIS WJAX WJDX WJZ WKY WLS WLW WMAL WMC WMT WOAI WPTF WREN WRVA WSB WSM WSMB WSOC WSYR WTAR WTMJ WWNC WXYZ

ED-9:30 p.m., E-8:30, C-7:30, M-6:30

- Benny Goodman Orchestra KFAB KFH KFPY KGKO KLRA KLZ KMBC KMOX KNX KOIN KOL KOMA KRLD KRNT KSCJ KSFO KSL KTRH KTSA KTUL KVI KVOR KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDNC WDOD WDRC WEEI WFBL WFBM WGST WHAS WHEC WHIO WHK WHP WIBW WIBX WISN WJAS WJR WJSV WKBN WKBW WKRC WLAC WLBZ WMAS WNAX WMBG WMBR WMBD WNBF WNOX WOC WOKO WORC WOWO WPG WPRO WQAM WREC WSBT WSFA WSJS WTOC WWL

R — Packard Program CRCT KDYL KFI KFYR KGW KHQ KOA KOMO KPO KPRC KSD KSTP KTBS KTHS KVOO KYW WAVE WBAP WBEN WCAE WCKY WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFLA WGY WHO WIBA WIOD WIRE WIS WJAR WJAX WJDY WKY WMAQ WMC WOAI WOW WPTF WRC WRVA WSM WSMB WSOC WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

ED-10:30 p.m., E-9:30, C-8:30, M-7:30 R - Jimmy Fidler Hollywood Gossip KDYL KFI KGW KHO KOA KOMO KPO KSD KTAR KYW WBEN WCAE WCSH WDAF WEAF WFBR WGY WHO WJAR WLW WMAQ WNAC WOOD WOW WRC WTAG WTAM WTIC WWJ

ED-10:45 p.m., E-9:45. C-8:45, M-7:45 R — Vic and Sade

KDYL KFI KGW KHO KOA KOMO KPO KSD KSTP KYW WCAE WCSH

WDAF WEAF WFBR WGY WHO WIRE WLW WMAQ WNAC WOW WRC WTAG WTAM WTIC WWJ

ED-11:00 p.m., E-10:00, C-9:00, M-8:00 C --- Poetic Melodies, See Monday R - Amos 'n' Andy, See Monday

#### WEDNESDAY

ED-6:35 p.m., E-5:35, C-4:35, M-3:35 C — Baseball Resume, See Monday

ED-6:45 p.m., E-5:45, C-4:45, M-3:45 R -- Lowell Thomas, See Monday

ED-7:00 p.m., E-6:00, C-5:00, M-4:00 C - Poetic Melodies, See Monday

R - Amos 'n' Andy, See Monday

B - Easy Aces, See Tuesday

ED-7:15 p.m., E-6:15, C-5:15, M-4:15 R — Uncle Ezra, See Monday

ED-7:30 p.m., E-6:30, C-5:30, M-4:30 - Lum and Abner, See Monday B.

ED-7:45 p.m., E-6:45, C-5:45, M-4:45

C - Boake Carter, See Monday

ED-8:00 p.m., E-7:00, C-6:00, M-5:00 C - Cavalcade of America

KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KRLD KRNT KSL KVI KWG WABC WBBM WBNS WCAU WCCO WDRC WEAN WFBL WFBM WGR WHAS WHEC WHK WJAS WJR WJSV WKRC WLAC WMBG WNAC WOKO WTOC WWL.

R - One Man's Family

KDYL KFI KFYR KGW KHQ KOA KOMO KPO KPRC KSD KSTP KTAR KTBS KTHS KVOO KYW WAPI WAVE WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFAA WFBR WFLA WGY WJAR WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WLW WMAQ WMC WOAI WOW WPTF WRC WRVA WSB WSM WSMB WSOC WSUN WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

ED-8:30 p.m., E-7:30, C-6:30. M-5:30 C - Ken Murray; Shirley Ross

CFRB CKAC KFAB KFH KLRA KMBC KMOX KOMA KRLD KRNT KSCJ KTRH KTSA KTUL KWKH WARC WADC WBBM WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDRC WEEI WFBL WFBM WGR WGST WHAS WHEC WHIO WHK WHP WIBW WIBX WJAS WJR WJSV WKRC WLAC WMBD WMBG WLBZ WMAS WMBR WNAX WNOX WOKO WORC WOWO WPG WPRO WQAM WREC WWL.

### R — Wayne King, See Tuesday

ED-9:00 p.m., E-8:00, C-7:00, M-6:00 C --- Kostelanetz

KDB KERN KFAB KFBK KFH KFPY KFRC KGB KGKO KGMB KHJ KLKA KLZ KMBC KMJ KMOX KOH KOIN KOL KOMA KRLD KRNT KSCJ KSL KTRH KTSA KTUL KVI KVOR KWG KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WCOA WDAE WDBG WDBO WDNC WDOD WDRC WEAN

### Wednesday (Continued)

WFBL WFBM WFEA WGST WHAS WHEC WHK WHP WIBW WIBX WICC WISN WJAS WJR WJSV WKBH WKBW WKRC WLAC WLBZ WMAS WMBD WMBG WMBR WNAC WNAX WNBF WNOX WOC WOKO WORC WOWO WPG WQAM WREC WSFA WSJS WSPD WTOC WWL.

#### R - Town Hall Tonight

KFYR KPRC KSD KSTP KTBS KTYR KPRC NOI NOIT RIDO KTHS KVOO KYW WAVE WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFAA WFBR WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WLW WMAQ WMC WOAI WOW WPTF WRC WSB WSM WSMB WSOC WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

#### ED-9:30 p.m., E-8:30, C-7:30, M-6:30 C — Jessica Dragonette

KDB KERN KFAB KFBK KFH KFPY KFRC KGB KGMB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KRNT KSL KTRH KTSA KTUL KVI KWG KWKH WABC WBBM WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDRC WEAN WFBL WFBM WGST WHAS WHEC WHK WICC WISN WJAS WJR WJSA WKBW WKRC WLAC WLBZ WMBG WMBR WNAC WOKO WORC WOWO WOAM WREC WTOC WWL

ED-10:00 p.m., E-9:00, C-8:00, M-7:00

C - Crime Crusade: Phil Lord KDB KERN KFAB KFBK KFH KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KRNT KSL KTRH KTSA KTUL KVI KWG KWKH WABC WACO WBBM WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDRC WEAN WFBL WFBM WGST WHAS WHEC WHK WICC WISN WJAS WJR WJSV WKBW WKRC WLAC WLBZ WMBG WMBR WNAC WOKO WORC WOWO WQAM WREC WTOC WWL

#### - Your Hit Parade

KDYL KEX KFI KFYR KGHL KGIR KGU KGW KHQ KOA KOMO KPO KPRC KSD KSTP KTAR KTBS KTHS KVOO KYW WAVE WCAE WCSC WCSH WDAF WDAY WEAF WEBC WFAA WFBR WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WLW WMAQ WMC WNAC WOAI WOW WPTF WRVA WSB WSM WSMB WRC WSOC WSUN WSYR WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

ED-11:00 p.m., E-10:00, C-9:00, M-8:00

C -- Poetic Melodies, See Monday

R - Amos 'n' Andy, See Monday

ED-11:15 p.m., E-10:15, C-9:15, M-8:15 C - Boake Carter, See Monday

#### THURSDAY

ED-8:35 p.m., E-5:35, C-4:35, M-3:35 C - Baseball Resume, See Menday WKRC WLAC WLBZ WMBG WMBR KDKA KDYL KFI KGW KHQ KOIL

B - Lowell Thomas, See Monday

ED-7:00 p.m., E-6:00, C-5:00, M-4:00

C -- Poetic Melodies, See Monday R - Amos 'n' Andy, See Monday

B -- Easy Aces, See Tuesday

ED-7:30 p.m., E-6;30, C-5:30, M-4:30 B - Lum and Abner, See Monday

ED-8:08 p.m., E-7:00, C-6:00, M-5:00

R - Rudy Vailee's Variety Hour

CFCF CRCT KDYL KFI KFYR KGW KHQ KOA KOMO KPO KSD KSTP KTAR KYW WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WGY WHO WJAR WLW WMAQ WOW WRC WTAM WTIC WTMJ WWJ

#### ED-8:30 p.m., E-7:30, C-6:30, M-5:30

M --- Guy Lombardo Orchestra CKLW KDB KDON KFEL KFRC KFXM KGB KGDM KHJ KPMC KSO KVOE KWK KXO WABY WBAL WFIL WGAR WKBW WMT WOL WOR WSAI WSYR WWSW Also on Canadian Network

### ED-9:00 p.m., E-8:00, C-7:00, M-6:00

C - Major Bowes' Amateurs CFRB CKAC KDB KERN KFAB KFBK KFH KFPY KFRC KGB KGKO KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KRNT KSCJ KSL KTRH KTSA KTUL KVI KVOR KWG KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WCOA WDAE WDBJ WDBO WDNC WDOD WDRC WEAN WFBL WFBM WFEA WGST WHAS WHEC WHK WHP WIBW WIBX WICC WISN WJAS WJR WJSV WKBN WKBW WKRC WLAC WLBZ WMAS WMBD WMBG WMBR WMMN WNAC WNAX WOC WOKO WORC WOWO WPG WQAM WREC WSFA WSJS WSPD WTOC WWL

### - Maxwell House Show Boat

KDYL KFI KFSD KFYR KGHL KGIR KWK KHQ KOA KOMO KPO KPRC KSD KSTP KTAR KTBS KYW WAPI WAVE WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFLA WGY WHO WIBA WIOD WIRE WIS WHO WIDA WIOD WIRE WIG WJAR WJAX WJDX WKY WMAQ WMC WOAI WOW WPTF WRC WRVA WSAI WSB WSM WSMB WSOC WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

#### ED-10:00 p.m., E-9:00, C-8:00, M-7:00 C - Your True Adventures

KFAB KFH KFPY KLRA KLZ KMBC KMOX KNX KOIN KOL KOMA KRLD KRNT KSFO KSL KTRH KTSA KTUL KVI KWKH WABC WBBM WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDRC WEEI WFBL WFBM WGST WHAS WHEC WHIO WHK WISN WJAS WJR WJSV WKBW

ED-6:45 p.m., E-5:45, C-4:45, M-3:45 WOKO WORC WPRO WQAM WREC WTOC WWL

#### - Bob Burns

CFCF CRCT KDYL KFI KFYR KGW KHQ KOA KOMO KPO KPRC KSD KSTP KTAR KTBS KTHS KVOO KYW WAVE WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFBR WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WLW WMAQ WMC WOAI WOW WPTF WRC WRVA WSB WSM WSMB WSOC WRVA WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

#### ED-10:30 p.m., E-9:30, C-8:30, M-7:30 C — March of Time

KFAB KFPY KLZ KMBC KMOX KNX KOIN KOL KOMA KRNT KSFO KSL KVI WABC WBBM WBNS WCAO WCAU WCCO WDRC WEEI WFBL WFBM WGST WHAS WHEC WHK WJAS WJR WJSV WKBW WKRC WOKO WPRO WWL

ED-11:00 p.m., E-10:00, C-9:00, M-8:00 C - Poetic Melodies, See Monday R - Amos 'n' Andy, See Monday

### FRIDAY

ED-6:35 p.m., E-5:35, C-4:35, M-3:35 C - Baseball Resume, See Monday

ED-6:45 p.m., E-5:45, C-4:45, M-3:45 B --- Lowell Thomas, See Monday

ED-7:00 p.m., E-6:00, C-5:00, M-4:00 C - Poetic Melodies, See Monday

R — Amos 'n' Andy, See Monday

ED-7:15 p.m., E-6:15, C-5:15, M-4:15 R-Uncle Ezra, See Monday

ED-7:30 p.m., E-6:30, C-5:30, M-4:30 B - Lum and Abner, See Monday

ED-6:45 p.m., E-5:45, C-4:45, M-3:45 C - Boake Carter, See Monday

#### ED-8:00 p.m., E-7:00, C-6:00, M-5:00

C — Hammerstein Music Hall KDB KERN KFAB KFBK KFPY KFRC KGB KHJ KLZ KMBC KMJ KMOX KOIN KOL KOMA KRNT KSL KVI KWG WABC WBBM WBNS WBRC WBT WCAO WCAU WCCO WDRC WEAN WFBL WFBM WFBR WGST WHAS WHK WJAS WJR WJSV WKRC WMAS WMBG WNAC WOKO WWL

### R - Cities Service Concert

R — Cities Service Concert CRCT CFYR KOA KPRC KSD KSTP KTBS KTHS KVOO KYW WBAP WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEL WFAA WFBR WCY WHO WIBA WIOD WJAR WCY WHAQ WOAI WOW WRC WRVA WSAI WTAG WTAM WTAC WTMI WWI WTIC WTMJ WWJ

#### B - Irene Rich: Drama

## FRIDAY (Continued)

KOMO KPO KSO KTAR KWK WAVE WBAL WBZ WBZA WCKY WFIL WGAR WHAM WIRE WJZ WLS WMAL WMC WMT WREN WSB WSM WSYR WXYZ

### ED-8:30 p.m., E-7:30, C-6:30, M-5:30 C - Hal Kemp

KFAB KFH KGKO KLRA KMBC KMOX KOMA KRLD KRNT KSCJ KTRH KTSA KTUL KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WCOA WDAE WDBJ WDBO WDNC WDOD WDRC WEEI WFBL WFBM WFEA WGR WGST WHAS WHEC WHIO WHK WHP WIBW WISN WJAS WJR WJSV WIBX WKBN WKRC WLAC WLBZ WMAS WMBG WMBR WMMN WMBD WNAX WNBF WNOX WOC WOKO WORC WOWO WPG WPRO WQAM WREC WSFA WSJS WSPD WTOC WWL

#### B - Death Valley Days

KDKA KDYL KPI KGW KHQ KOIL KOMO KPO KSO KWK WBAL WBZ WBZA WFIL WGAR WHAM WJZ WLS WLW WMAL WMT WREN WSYR WXYZ

#### ED-9:00 p.m., E-8:00, C-7:00, M-6:00 C — Hollywood Hotel

C — Hollywood Hotel CFRB CKAC KDB KERN KFAB KFBK KFH KFPY KFRC KGB KHJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KRNT KSCJ KSL KTRH KTSA KTUL KVI KVOR KWG KWKH WABC WADC WBBM WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDRC WEAN WFBL WFEM WFEA WOGST WHAS WHEC WJAS WJR WIBW WIBX WICC WJAS WJR WJSV WKBW WKRC WLAC WLBZ WMAS WMBD WMBG WMBR WNAC WNAX WNOX WORC WSPC WFG WQAM WREC WSPD WWL

#### R - Frank Munn: Bernice Claire

KSD KYW WBEN WCAE WCSH WDAF WEAF WEEL WFBR WGY WJAR WLW WMAQ WOW WRC WTAG WTAM WWJ

#### B --- "Believe it or Not" Ripiey

KANS KDKA KFYR KGNC KLO KOILKPRCKSO 3VOD KWK WAPI WAVE WBAL WBAP WBZ WBZA WDAY WEAN WEDC WEBR WFAA WFBC WFIL WGAR WHAN WIBA WICC WJZ WKY WLS WLW WMAL WMC WMT WOAI WOOD WPTF WHEN WHTD WSB WSM WSMB WSOC WSPD WSYR WTAR WTCN WTMJ WXYZ

#### ED-9:30 p.m., E-8:30, C-7:30, M-6:30 R - True Story Court

RSD KYW WBEN WCAE WCSH WEAF WEEI WFBR WGY WHO WHIO WJAR WMAQ WOW WRC WTAG WTAM WTIC WWJ

ED-10:00 p.m., E-9:00, C-8:00, M-7:00 C — Ferde Grofe Orchestra KLRA KLZ KMBC KMOX KOL

KRLD KRNT KSL KTRH KTUL KVI WABC WBBM WCAU WDBJ WDOD WEEI WFBL WFBM WGST WHAS WHEC WHIO WHK WISN WJAS WJR WKBW WKRC WMBD WMBR WNBF WOKO WPRO WSBT WTOC WWL

#### R — First Nighter; Drama

KDYL KFI ŘFYR KGW KHQ KOA KOMO KPO KPRC KSD KSTP KTBS KTHS KYW WAVE WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEI WFAA WFBR WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WLW WMAQ WMC WPTF WRC WRVA WSB WSM WSMB WSOC WTAG WTAM WTAR WTIC WTMJ WWJ

#### **B** — Morton Bowe

KDKA KECA KFSD KGA KGO KJR KLØ KOIL KSO KWK WABY WBAL WBZ WBZA WCKY WCOL WEAN WEBR WENR WFIL WFLA WGAR WHAM WICC WIDD WIS WJAX WJZ WMAL WMT WOOD WPTF WREN WRVA WSOC WSUN WSYR WTAR WWNC WXYZ

### ED-10:30 p.m., E-9:30, C-8:30, M-7:30 R — Jimmy Fidler

KDYL KFI KGW KHQ KOA KOMO KPO KSD KSTP KYW WBEN WCAE WCSH WDAF WDEL WEAF WFBR WGY WIBA WIRE WJAR WLW WMAQ WNAC WOW WRC WTAG WTAM WTIC WTMJ WWJ

## ED-11:00 p.m., E-10:00, C-9:00, M-8:00

R — Amos 'n' Andy, See Monday

### ED-11:15 p.m., E-10:15, C-9:15, M-8:15 C — Boake Carter, See Monday

### ED-11:30 p.m., E-10:30, C-9:30, M-8:30 C — Hal Kemp

KFBB KFPY KGMB KGVO KLZ KNX KOH KOIN KOL KSFO KSL KVI KVOR

## SATURDAY

ED-6:35 p.m., E-5:35, C-4:35, M-3:35 C --- Baseball Resume, See Monday

ED-8:00 p.m., E-7:00, C-6:00, M-5:00 C — Saturday Swing Club

KFBB KFJ KFY KGKO KGVO KLZ KNOW KOH KOL KOMA KRLD KSCJ KSFO KSL KTRH KTSA KVI KVOR KWKII WABC WACO WADC WBIG WBNS WBT WCAO WCAU WCCO WDAE WDBO WDRC WEAI WFBL WGR WHEC WHK WHP WIBW WIBX WJSN WJAS WLBZ WMAS WMBD WABG WNBF WOC WOKO WORC WFRO WSJS WWVA

## ED-8:30 p.m., E-7:30, C-6:30, M-5:30 C — Phil Duey; Russ Morgan

KFAB KFH KMBC KMOX KRNT WABC WADC WBBM WBIG WBNS WBT WCAO WCAU WCCO WCOA WDRC WEEI WFBL WFBM WGR WGST WHAS WHEC WHIO WHE WHP WISN WJAS WJR WJSV

WKRC WMBD WMBG WNBF WOC WOKO WPRO WSBT WWVA

#### ED-9:00 p.m., E-8:00, C-7:00, M-6:00 C — Prof. Quiz

KDB KERN KFAB KFBK KFPY KFRC KGB KIJ KLRA KLZ KMBC KMJ KMOX KOIN KOL KOMA KRLD KRNT KSL KTRH KTSA KVI KWG WABC WBBM WBNS WBT WCAO WCAU WCCO WDAE WDBO WDRC WEAN WFBL WFBM WJAS WJA WJAS WFBW WKRC WMBR WOKO WQAM WREC WSPD WWL

#### B — National Barn Dance

KDKA KOIL KPRC KSO KTBS KTHS KWK WABY WAPI WAVE WBAL WBAP WBZ WBZA WFIL WFLA WGAR WHAM WIOD WIRE WIS WJAX WJDX WJZ WKY WLS WMAL WMC WMT WOAI WOOD WPTF WREN WRVA WSB WSMB WSOC WSUN WSYR WTAR WWNC WXYZ

#### ED-10:00 p.m., E-9:00, C-8:00, M-7:00 C — Your Hit Parade

KERN KFAB KFBK KFH KFPY KERC KGB KGKO KGMB KHJ KERA KLZ KMBC KMJ KMOX KOH KOIN KOL KOMA KRLD KRNT KSCJ KSL KTRH KTSA KTUL KVI KVOR KWG KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WCOA WDAE WDBJ WDBO WDNC WDOD WDRC WEAN WFBL WFBM WFEA WGST WHAS WHEC WHK WHP WIBW WIBX WISN WJAS WJR WJSV WICC WKBW WKRC WLAC WLBZ WMAS WMBD WMBG WMBR WNAC WNAX WNOX WOC WOKO WORC WPG WQAM WREC WSBT WSFA WSJS WSPD WTOC WWL WWVA

## ED-11:00 p.m., E-10:00, C-9:00, M-8:00

CBC — The Northern Messenger CFAC CFCH CFCO CFJC CFPL CFQC CHWK CJAT CJCA CJCX CJKL CJOC CJRM CJRO CJRX CKBI CKCK CKGB CKOC CKOV CKPR CKCO CKTB CKX CKY CRCK CHCM CRCO CRCS CRCT CRCV CRCW CRCX

#### B --- National Barn Dance

KDYL KFI KFSD KFYR KGHL KGIR KGU KGW KHQ KOA KOMO KPO KSTP KTAR WDAY WEBC WIBA WLW WTMJ

#### SUNDAY

#### ED-11:30 a.m., E-10:30, C-9:30, M-8:30 C — Major Bowes' "Family"

CFRB KEIN KFAB KFBH KFBK KFH KFPY KFRC KGB KGVO KMBC KOH KOL KRLD KSL KTRH KTSA KVI KVOR KWG KWKH WABC WACO WADC WALA WBNS WBRC WCAO WCCO WDAE WDBJ WDBO WDNC WESG WFBL WFEA WHAS WHK WIBX WJAS WJR WKRC WLBZ WMBD WMBR WMMN WOC WOKO WORC WFG WQAM WSBT WJSS WSPD

## SUNDAY (Continued)

#### ED-12:30 p.m., E-11:30 a.m., C-10:30 M-9:30

C - Sait Lake Tabernacle Choir CFRB KFAB KFBB KFBK KFH KFPY KFRC KGB KLZ KOH KOL KRLD KSL KTRH KTSA KVI KVOR KWG WABC WACO WADC WALA WBIG WBNS WBRC WCAO WCCO WDAE WDBJ WDBO WESG WFBL WFEA WGR WHAS WICC WJAS WJR WKRC WLBC WMBR WMMN WOC WOKO WORC WQAM WSBT WSJS WSPD WTOC

#### ED-1:00 p.m., E-Noon, C-11:00 a.m., M-10-00

### C --- Church of the Air

KFBK KFH KFPY KFRC KGB KHJ KMOX KOH KOL KOMA KRLD KRNT KSCJ KSL KTRH KTSA KVI WDBO WDRC WESG WFBL WFBM WGR WHAS WHP WIBX WJAS WJSV WKBN WKRC WLAC WLBZ WMBR WNBF WOC WOKO WORC WPG WQAM WREC WSBT WSJS WSPD WTOC WWVA

#### ED-2:00 p.m., E-1:00, C-Noon, M-11:00 a.m.

#### **B** -- Magic Key of RCA

CFCF CRCT KDKA KDYL KFI KFYR KGU KGW KHQ KOA KOIL KOMO KPO KPRC KSO KSTP KTBS KTHS KVOO KWK WAPI WAVE WBAL WBZ WBZA WCKY WDAY WEBC WENR WFAA WFIL WFLA WGAR WHAM WHIO WIBA WIOD WIRE WIS WJAX WJDX WJZ WKY WMAL WMC WMT WOAI WPTF WREN WRVA WSB WSM WSMB WSOC WSYR WTAR WTMJ WWNC WXYZ

#### ED-2:30 p.m., E-1:30, C-12:30, M-11:30 a.m.

#### R — Thatcher Colt Mystery

KDYL KFI KGW KHQ KOA KOMO KPO KSD KSTP KPO KSD KSTP KYW WBEN WBOW WCAE WCSH WDAF WEAF WFBR WGBF WGY WHO WIRE WJAR WMAQ WNAC WORK WOW WRC WSAI WTAG WTAM WTIC WWJ

#### ED-3:00 p.m., E-2:00, C-1:00, M-Noon C - Everybody's Music

CFRB CKAC KFAB KFBB KFH KGKO KGVO KLRA KLZ KMBC KMOX KNOW KOL KRLD KSCJ KSL KTRH KTSA KWKH WABC WADC WALA WBNS WBT WCAO WCCO WCHS WDAE WDBJ WDBO WDRC WEEI WESG WFBL WFBM WHAS WHK WHP WIBW WIBX WJAS WJR WJSV WKBB WKBN WKBW WKRC WLAC WLBZ WMAS WMBD WMBG WMBR WMMN WNBF WOC WOKO WORC WPAR WPRO WQAM WSBT WSJS WTAQ WTOC WWL

EB-5:30 p.m., E-4:30, C-3:30, M-2:30 C - Guy Lombardo and Orchestra KFH KMBC KMOX KOMA KTUL WAAB WABC WBNS WCAO WCAU WDRC WEAN WFBL WFBM WGR WHAS WHEC WHK WIBX WICC WJR WJSV WMAS WOKO WORC WSPD WWVA

ED-6:00 p.m., E-5:00, C-4:00, M-3:00 M — Ray Knight; Arnold Johnson

CKLW KHJ KWK WAAB WBAL WFIL WGAR WGN WLW WOR

### ED-6:30 p.m., E-5:30, C-4:30, M-3:30 R — A Tale of Today

WBEN WEAF WGY WJAR WMAQ WOW WRC WTAM

ED-7:00 p.m., E-6:00, C-5:00, M-4:00

## C — Columbia Workshop

C - Columbia worksnop KFAB KFBB KFH KFPY KGKO KGVO KNOW KOH KOIN KOL KOMA KRLD KRNT KSCJ KSFO KTRH KTSA KTUL KVI KVOR KWKH WABC WACO WADC WALA WBBM WBNS WBRC WBT WCAO WCCO WCOA WDAE WDBO WDNC WFBL WFBM WGR WGST WHEC WHIO WHK WHP WIBX WISN WJAS WJNO WKRC WLBZ WMAS WMBG WMMN WNOX WOKO WORC WPG WREC WSBT WSJS WSPD WTOC

## R — Jeilo Program

KSD KYA KYW WBEN WCAE WCSH WDAF WEAF WFBR WGY WHO WJAR WLW WMAQ WNAC WOW WRC WTAG WTAM WTIC WW.J

### ED-7:30 p.m., E-6:30, C-5:30, M-4:30 C — Oscar Bradley Orchestra

KLRA KLZ KRLD KTRH KTSA KTUL KWKH WABC WACO WADC WALA WBIG WBNS WBRC WBT WCAO WCAU WCOA WDAE WDBJ WDBO WDNC WDOD WDRC WEAN WFBL WFBM WFEA WGR WGST WHAS WHEC WHK WHP WIBX WICC WJAS WJR WJSV WKBN WKRC WLAC WLBZ WMAS WMBR WNAC WNOX WOKO WORC WQAM WREC WSBT WSFA WSJS WSMK WSPD WTOC WWL WWVA

#### R - Fireside Recitals

KSD KYW WBEN WCAE WCSH WDAF WEAF WFBR WGY WIRE WJAR WMAQ WOW WRC WSAI WTAG WTAM WTIC WWJ

ED-7:45 p.m., E-6:45, C-5:45, M-4:45 R - Sunset Dreams; Morin Sisters CFCF CRCT KSD KYW WBEN WCAE WCSH WDAF WEAF WFBR WGY WHO WIRE WJAR WLW WMAQ WOAI WOOD WOW WRC WTAG WTAM WTIC WWJ

#### ED-8:00 p.m., E-7:00, C-6:00, M-5:00 C - Gillette Program

KFAB KFH KFPY KLRA KLZ KMBC KMOX KNX KOIN KOL KOMA KRLD KRNT KSCJ KSFD KSL KTRH KTSA KTIII. KVI KWKH,WABC WADC WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WDAE WDBJ WDBO WDRC WEEI WFBL WFBM WGR WGST WHAS WHEC WHIO WHK WHP WIEX WJAS WJR WJSV WKBN WKRC WLAC WLBZ WMAS WMBG

WMBR WNAX WNBF WNOX WOKO WORC WPRO WOAM WREC WSBT WWL WWVA

#### R-- Don Ameche; Edgar Bergen

CFCF CRCT KDYL KFI KFYR KGW KHQ KOA KOMO KPO KPRC KSD KSTP KTAR KTBS KVOO KYW WAVE WBEN WCAE WCSH WDAF WBLAY WBLAY WGAE WCSH WDAF WEDAY WEAF WEBC WFAA WFDR WFLA WGY WHO WIBA WIOD WIRE WIS WJAR WJAX WJDX WKY WLW WMAQ WMC WNAC WOAI WOW WPTF WRC WRVA WSB WSM WSMB WSOC WSUN WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

ED-8:30 p.m., E-7:30, C-6:30, M-5:30 C — Texaco Program

KFAB KFH KGKO KLRA KMBC KMOX KOMA KRLD KRNT KSCJ KTRH KTSA KTUL KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WCOA WDAE WDBJ WDBO WDNC WDOD WDRC WEAN WFBL WFBM WFEA WGR WGST WHAS WHEC WHK WHP WIBW WIBX WICC WISN WJAS WJR WJSV WKBN WKRC WLAC WLBZ WMAS WMBD WMBR WMMN WNAX WMBD WMBR WMMIN WNAA WNOX WOC WOKO WORC WQAM WREC WSBT WSFA WSJS WSMK WSPD WTOC WWL WWVA

## ED-9:00 p.m., E-8:00, C-7:00, M-6:00 B — Frank Parker; Shep Fields

KDKA KECA KFSD KGA KGHL KGIR KGO KJR KLO KOIL KSO KTAR KWK WBAL WBZ WBZA WEBC WEBR WENR WFIL WGAR WHAM WICC WJZ WLW WMAL WMT WREN WSYR WXYZ

## R — Manhattan Merry-Go-Round

CFCF KDYL KFI KFYR KGW KHQ KOA KOMO KPO KPRC KSD KSTP KTBS KTHS KYW WAVE WBEN WCAE WCKY WCSH WDAF WDAY WEAF WEBC WEEI WFAA WFBR WFLA WGY WHO WIBA WIOD WIRE WIS WJAR WJAX WJDX WKY WMAQ WMC WOAI WOW WPTF WRC WRVA WSB WSM WSMB WSOC WTAG WTAM WTAR WTIC WTMJ WWJ WWNG

### - Ford Universal Rhythm

CFRB CKAC KDB KERN KFAB KFBK KFH KFPY KFRC KGB KGKO KHJ KLRA KLZ KMBC KMJ KMOX KOH KOIN KOL KOMA KRLD KRNT KSCJ KSL KTRH KTSA KTUL KVI KVOR KWG KWKH WABC WACO WADC WALA WBBM WBIG WBNS WBRC WBT WCAO WCAU WCCO WCOA WDAE WDBJ WDBO WDNC WDOD WDRC WEAN WFBL WFBM WFEA WGR WGST WHAS WHEC WHK WHP WIBW WIBX WICC WISN WJAS WJR WJSV WKBN WKRC WLAC WLBZ WMAS WMBD WMBR WNAC WNAX WOC WOKO WORC WQAM WREC WSBT WSFA WSJS WSPD WTOC WWL WWVA

ED-9:30 p.m., E-8:30, C-7:30, M-6:30 R — Album of Familiar Music CFCF CRCT KDYL KFI KFYR

## SUNDAY (Continued)

KGW KHQ KOA KOMO KPO KPRC KSD KSTP KTBS KYW WAPI WAVE WBEN WCAE WCSH WDAF WDAY WEAF WEBC WEEL WFAA WFDR WFLA WGY WHO WIBA WIOD WIS WJAR WJAX WJDX WKY WMAQ WMC WOAI WOW WPTF WRC WRVA WSAI WSB WSM WSMB WSOC WTAG WTAM WTAR WTMJ WWJ

#### B --- Walter Winchell

KDKA KECA KEX KFSD KGA KGHL KGIR KGO KJR KLO KOIL KSO KTAR KWK WBAL WBZ WBZA WENR WFIL WGAR WHAM WJZ WLW WMAL WMT WREN WSYR WXYZ

ED-10:00 p.m., E-9:00, C-8:00, M-7:00 R --- James Melton

KDYL KFI KGBX KGW KHQ KOA KPO KPRC KSD KSTP KTAR KTBS KTHS KYW WAVE WBAP WBEN WCAE WCSH WDAF WEAF WFBR WFLA WGY WHO WIBA WIOD WIRE WIS WJAR WJAX WJDX WKY WMAQ WMC WNAC WOAI WOOD WOW WPTF WRC WRVA WSB WSM WSMB WSOC WTAG WTAM WTAR WTIC WTMJ WWJ WWNC

ED-11:00 p.m., E-10:00, C-9:00, M-8:00 R --- Sunset Dreams; Morin Sisters KDYL KFI KFSD KGW KHQ KOA

KOMO KPO KPRC KTAR KTBS KTHS WBAP WDAF WKY

## ED-11:15 p.m., E-10:15, C-9:15, M-8:15 B — Walter Winchell

KDYL KFI KFSD KCHL KGIR KGW KHQ KOA KOMO KPO KPRC KTAR KTBS KTHS WAPI WAVE WBAP WJDX WKY WMC WOAI WSB WSM WSMB

### ED-11:30 p.m., E-10:30, C-9:30, M-8:30 B --- Frank Parker; Shep Fields

KPRC KTBS KTHS KVOD WAPI WAVE WBAP WJDX WKY WMC WOAI WSB WSM WSMB

## International SHORTWAVE Tests

THE Columbia Broadcasting System, through its new high-power international shortwave transmitter W2XE at Wayne, N. J., is collaborating with the British Broadcasting Corp. in a series of important shortwave tests which will serve as a basis for recommendations to the 1938 meeting of the International Consulting Committee on Radio at Cairo, Egypt. At this meeting, the governments of the world will draft new standards for international telecommunication.

The effectiveness of directional antennas in preventing interference between two or more countries employing the same frequency is one of the most important points on which the tests are expected to The other principal throw light. purpose of the tests is to determine the necessary frequency separation which should exist between shortwave broadcasting stations in various transmission bands. During the tests the signals transmitted by W2XE and the BBC Empire stations at Daventry will be simultaneously observed in Argentina. Signals are transmitted first on identical fredifferent frequencies, then on

quencies in close proximity. The tests are conducted on frequencies of 21520, 15270 and 11830 kcs.

The technical committee of the International Broadcasting Union, under whose auspices the tests are conducted, decided on the new experimental program after consideration of a report by the engineering delegate representing the British Broadcasting Corp. For the past two years, at Columbia's request, the BBC's receiving station at Tatsfield, Surrey, has observed W2XE's signals and sent in weekly reports on them.

The ultimate purpose of these tests is to reduce overcrowding in the shortwave bands. The trans-Atlantic tests may make possible a more efficient usage of the limited number of wavelengths utilized.

Italian radio listeners breathed a long sigh of relief on July 1st, date on which the Italian Broadcasting System banned all advertising from its programs. Henceforth, the lover of operas and symphonies in Italy will no longer face the nervewracking strain of being brought suddenly face to face with toothpaste or tomatoes at the end of an act of La Traviata or Aida.

"I do my DXing for my own amusement and am quite satisfied simply to hear the stations, so do not verify. I use a seven-tube RCA with a double-doublet aerial and one hundred feet of twisted pair for lead-in," preambles Edward Burton, 106 W. Broad St., Tampa, Fla. "My reception of stations in Europe, South America and Australia has been very good. I listen to the fifteen minute news broadcasts in English from I2RO in Rome at 6 pm EST six times a week.

VK3ME in Melbourne is nicely received near 7 am, and sometimes I can hear VK2ME and VK6ME but they are generally weak.

"During electrical storms I detach the aerial from the radio and drop this wire out the window to the ground, and connect the radio to the bedsprings with a piece of insulated wire. Believe it or not, my reception on this hook-up is sometimes superior to the more conventional aerial. Australia has been heard many times on my bed-spring aerial."

## CLASSIFIED INDEX TO CHAIN PROGRAMS

Time in Eastern Daylight

C-Columbia; R-National (Red); B-National (Blue); M-Mutual

### CONCERTS

Everybody's Music, 3 p.m. Sun., C Frank Black, 2 p.m. Sun., B Rosario Bourdon, 8 p.m. Fri., R G. M. "Prom" Concert, 8 p.m. Sun., B Radio City Music Hall, 12:30 p.m. Sun., B Don Voorhees, 8 p.m. Wed., C

#### DANCE BANDS

Ben Bernie, 9 p.m. Tues., B Bunny Berigan, 8 p.m. Sat., C Oscar Bradley, 7:30 p.m. Sun., C Rex Chandler, 9 p.m. Sun., C Jimmie Dorsey, 10 p.m. Thurs., R Tommy Dorsey, 10 p.m. Fri., B Shep Fields, 9 and 11:30 p.m. Sun., B Lud Gluskin, 8:30 Wed., C Al Goodman, 9 and 11:15 p.m. Thurs., R Benny Goodman, 9:30 p.m. Tues., C Johnny Green, 9:30 p.m. Tues., R Phil Harris, 7 and 11:30 p.m. Sun., R Horace Heidt, 8 p.m. Mon., C Arnold Johnson, 6 p.m. Sun., M Hal Kemp, 8:30 and 11:30 p.m. Fri., C Wayne King, 8:30 p.m. Tues. and Wed., R: 10 p.m. Mon., C Andre Kostelanetz, 9 p.m. Wed., C Guy Lombardo, 5:30 p.m. Sun., C: 8:30 Thurs., M Abe Lyman, 8:30 p.m. Mon., B; 9 p.m. Fri., R; 10 p.m. Wed., R Russ Morgan, 8:30 and 11:30 p.m. Sat., C: 8 p.m. Tues., R Ray Noble, 8 p.m. Mon., R Raymond Paige, 9 p.m. Fri., C Jacques Renard, 8:30 and 11 p.m. Sun., C Andy Sanella, 9 p.m. Sun., R Andy Sanena, 9 p.m. Sonn, R Phil Spitalny, 9:30 Mon., R Rudy Vallee, 8 p.m. Thurs., R Peter Van Steeden, 9 p.m. Wed., R Don Voorhees, 5:30 p.m. Sun., B DIALOG Amos 'n' Andy, 7 and 11 p.m. daily, except Sat. and

Sun., R Bob Burns, 10 p.m. Thurs., R

Burns and Allen, 8 p.m. Mon., R Easy Aces, 7 p.m. Tues., Wed., Thurs., B Ray Knight, 6 p.m. Sun., M

Beatrice Lillie, 8 p.m. Wed., B

Lum and Abner, 7:30 p.m. daily except Sat. and Sun., B Ken Murray, 8:30 Wed., C Pick and Pat, 8:30 and 11:30 p.m. Mon., C Uncle Ezra's Radio Station, 7:15 p.m. Mon., Wed., Fri., R DRAMA Columbia Workshep, 7 p.m. Sun., C Death Valley Days, 8:30 p.m. Fri., B First Nighter, 10 p.m. Fri., R Gang Busters, 10 p.m. Wed., C Hollywood Hotel, 9 p.m. Fri., C It Can Be Done, 8:30 Tues., B Phillips Lord, 10 p.m. Wed., C One Man's Family. 8 p.m. Wed., R Irene Rich, 8 p.m. Fri., B Tale of Today, 6:30 p.m. Sun., R POPULAR PROGRAMS Album of Familiar Music, 9:30 p.m. Sun., R Major Bowes, 11:30 a.m. Sun. and 9 p.m. Thurs., C Broadway Merry-Go-Round, 8 p.m. Wed., B Cavalcade of America. 8 p.m. Wed., C Chesterfield Program, 9 p.m. Wed., C Cities Service Concert, 8 p.m. Fri., R Contented Program, 10 p.m. Mon., R Fireside Recitals, 7:30 p.m. Sun., R Fieldschmann Variety Hour, 8 p.m. Thurs., **R** Hit Parade. 10 p.m. Yell, **R**; 10 p.m. Sat., C Hollywood Motel, 9 p.m. Fri., C Husbands and Wives, 8 p.m. Tues., **B** Magic Key of RCA, 2 p.m. Sun., B Manhattan Merry-Go-Round, 9 p.m. Sun., R March of Time, 10:30 p.m. Thurs., C Maxwell House Show Boat, 9 p.m. Thurs., R National Barn Dance, 9 and 11:30 p.m. Sat., B Packard Hour, 9:30 p.m. Tues., R Palmolive Hour, 9:30 p.m. Wed., C Paramount on Parade, 12 noon Sun., R Al Pearce and His Gang, 9 p.m. Tues., C Professor Quiz, 9 p.m. Sat., C Studebaker Champions, 10 p.m. Mon., B True Adventures, 10 p.m. Thurs., C Voice of Firestone, 8:30 p.m. Mon., R Vox Pop, 9 p.m. Tues., R Waltz Time, 9 p.m. Fri., R Watch The Fun Go By, 9 p.m. Tues., C SINGERS Kenny Baker, 7 and 11:30 p.m. Sun., R Richard Boneili, 7:30 and 10:45 p.m. Sat., C

Morton Bowe, 10 p.m. Fri., B	Frank Parker, 9 and 11:30
Bobby Breen, 8:30 and 11 p.m. Sun., C	Jan Peerce, 6:30 p.m. Sun
Rachel Caralay, 9 p.m. Sun., R	Carmella Ponselle, 8 p.m.
Jessica Dragonette, 8 p.m. Fri., R; 9:30 p.m. Wed., C	Virginia Rea, 6:30 p.m. Su
Phil Duey, 8 and 11:30 p.m. Tues., R; 8:30 Sat., C	Lanny Ross, 9 p.m. Thur
Mary Eastman, 9:30 p.m. Sat., C	Shirley Ross, 8:30 p.m. V
Nelson Eddy, 8 p.m. Sun., R	Margaret Speaks, 8:30 an
Jack Fulton, 7 and 11 p.m. Mon. thru Thurs., C	Gladys Swarthout, 10 p.m
Helen Jepson, 9 and 11:15 p.m. Thurs., R	Conrad Thibault, 9:30 p.m
Jones and Hare, 10 p.m. Sun., C	Kay Thompson, 8:30 and
Frances Langford, 9 p.m. Fri., C	Trudy Woods, 9:30 p.m. 7
Shirley Lioyd, 7:30 p.m. Sun., B	TA
Luilaby Lady, 10 p.m. Mon., R	Boake Carter, 7:45 and 11
Elizabeth Lennox, 8 p.m. Fri., C	Jimmy Fidler, 10:30 p.m.
Nick Lucas, 9 p.m. Tues., C	Floyd Gibbons, 10 p.m. 1
Lucille Manners, 8 p.m. Fri., R	Eddie Guest, 8:30 p.m. Tu
Helen Marshall, 7:30 p.m., Sun., R	Bob Ripley, 7:30 p.m. Sur
Lucy Monroe, 9:30 p.m. Sun., R	Sidewalk Interviews, 9 p
Morin Sisters 7:45 and 11 p.m. Sun., K	Lowell Thomas, 6:45 p.m
Frank Munn, 9:30 p.m. Sun. and 9 p.m. Frl., R; 8:30	Waiter Wincheil, 9:30 and
p.m. Mon., B	Waiter Whiteheit, 5165 and

othy Page, 10:30 p.m. Sat., R 30 p.m. Sun., B 30 p.m. Sull., B n., C Sun., C Sun., C wed., C .nd 11:30 p.m. Mon., R m. Sun., R m. Tues., R 11:30 p.m. Fri., C Tues., R ALKS ALKS 11:15 Mon., Wed., Fri., C 1. Tues., R Thurs., C fues., B fues., B p.m. Tues., R m. Mon. thru Fri., B nd 11:15 p.m. Sun., B

## SHORTWAVE BROADCASTING STATIONS OF THE WORLD

Frequencies are given in megacycles. Power is given in parentheses in kilowatts. Schedules are shown in Eastern Standard Time by the 24-hour clock. All schedules daily unless otherwise noted.

Time Conversion Table on Page 62

		A Chablang
		Amateur Stations. Monterrey, N. L. (.03).
2.500	XEXP	Amateur Stations.
3.500	to 4.000	Tandjong Prick, Java, N.E.I. (10.).
	YDA	Khabarovsk, USSR (Siberia). (20.).
4.273	RV15	n100-1000.
4.600	HC2ET	Guayaquil, Ecuador. Wed., Sat., 2100-2230.
4.795	VE9BK	Vancouver, B. C. (.25).
4.810	YDE2	Solo, Java, N.E.I. (.1).
5.415	PMY	Bandoeng, Java, N.E.I. (.45). 0530- 1000.
5.500	TI5HH	San Ramon, Costa Rica. (.2). 2000- 2330.
5.710	TGS	Guatemala City, Guat. (.2). Wed., Thurs., Sat., 1800-2100.
	YV2RA	San Cristobal, Venez. 1800-2330.
5.720	RV15	Khabarovsk, USSR (Siberia). (20.). 0100-1000.
5.725	HC1PM	Quito, Ecuador. Sat., 2100-2300.
5.758		Managua, Nicaragua. 2000-2130.
5.780	OAX4D	Lima, Peru. (3.5). Mon., Wed., Sat., 2100-2330.
5.800	YV5RC	Caracas, Venez. (1.). Sun., 0830- 2330. Weekdays 0700-2130.
5.820	TIGPH	San Jose, Costa Rica. 1100-1300; 1800-2200-
5.850	YV1RB	Maracaibo, Venez. Sun., 1145-1245. Weekdays 0845-0945; 1115-1215; 1645-2145.
5.855	, HILJ	San Pedro de Macoris, D. R. (.04). 1200-1400; 1830-2100.
5.875	HRN	Tegucigalpa, Honduras. (.4). Sun., 2030–2130. Weekdays 2030–2200.
5.880	YV3RB	Barguisimeto, Venez. 1800-2200.
5.885		Santiago, D. R. 1800-2300.
5.905		San Jose, Costa Rica. 1800-2300.
5.910		Port-au-Prince, Haiti. 1900-2200.
	YV4RH	Valencia, Venez. 1700-0100.
5.92	5 PJC1	Willemstad, Curacao, N.W.I. (.15). 1835-2035.
5.930	) YV1RL	Maracaibo, Venez. (.3). 1700-2230.
5,94		Guatemala City, Guat. (.2). Sun., 1300-1400; Mon., Thurs., Sat., 1600- 1800; 2200-2400.
5.97	HJ4ABC	Medellin, Colombia, 2000-2230.
5.98	HJ2AB	) Bucaramanga, Colombia. (.67).
		1900-2300.
6.00	OAX5C XEBT	

	•	
6.005	CFCX HP5K Ve9DN	Montreal, P. Q. (.075). 0700-2400. Colon, Panama. 1800-2300. Montreal, P. Q. (6.).
6.010	COCO	Havana, Cuba. (.3). Sun. 2000-2200. Weekdays 1030-1300; 1600-2000.
	OLR2A	Prague, Czechoslovakia. (35.). Mon., Wed., Fri., 1600-1630.
6.012	НЈЗАВН	Bogota, Colombia. (1.2). 1800-2300.
6.015	HI3U	Santiago de los Caballeros, D. R. (.025), Mon. 2000-2100. Daily 0730- 0930; 1200-1430; 1700-1930.
6.020	DJC XEUW	Berlin, Germany. (8.). 1135-1630. Veracruz, Ver. (.02). 1800-2400.
6.025	HJIABJ	Santa Marta, Colombia. (.05). 1800–2230.
6.030	НЈ4АВР	Medellin, Colombia. (2.5). 1800- 2300.
	HP5B	Panama City, Panama. (.1). 1700- 2200.
	OLR2B	Prague, Czecho. (35.).
	VE9BJ	St. John, N. B. (.05).
	XEBQ	Mazatlan, Sin. (.05).
6.035	CXA2	Montevideo, Uruguay. (.5).
6.040	PRA8	Pernambuco, Brazii. (3.). 1500-
		2000.
	W1XAL	2000.
	W4XB	Miami, Fla. (5.).
	YDA	Tandjong Prick, Java, N.E.I. (10.).
6.042		Barranquilla, Colombia. (.15), 1100-2300.
6.050	GSA	Daventry, Gt. Britain. (20.).
6,060		Bogota, Colombia. (.05). 1930-2400.
	VQ71 0	Nairobi, Kenya. 1100-2430.
	W3XAU	
	W8XAL	2300-0100.
6.062	SBG	Motala, Sweden. (.5). 1330-1700. Toronto, Ont. (1.). 1000-2300.
6.070	CFRX	
	HJ3ABI	
6.070	YV1RD	
6 <b>.07</b> 5	VP3MR	2100.
	XEBW	
6.080	DJM	Berlin, Germany. (8.). Colon, Panama.
	HP5F OAX4Z	
	VE9CS	Vancouver, B. C. (.01). 1400-2400.
	W9XAA	
	WYXAA	QMCago, III. (20.). 1000-2400.

56

## SHORTWAVE BROADCASTING STATIONS OF THE WORLD

6.085	HJ5ABE	Cali, Colombia. 1900-2200.
6.090	CRCX	Cali, Colombia. 1900-2200. Toronto, Ont. (1.). 1100-1900. Ibague, Colombia. 2000-2200.
	HJ4ABC	Ibague, Colombia, 2000-2200,
	XECU	Guadalajara, Jai.
	ZBW	Guadalajara, Jal. Hong Kong. (2.5). Sat. 2100-2400.
		Sun. 0000-0100; 0300-0930. Other
		days 0400-1000: 2330-0100.
6.097	HJ4ABE	Medellin, Colombia. (J.). 1800-2230. Bound Brook, N. J. (35.). 1900-2200. Chicago, III. (10.). 2200-0100.
S.100	W3XAL	Bound Brook, N. J. (35.), 1900-2200.
	W9XF	Chicago, III, (10.), 2200-0100.
	9.14	Belgrade, Jugoslavia. (1.). 1200-
		1700.
6.108	HJ4ABB	Manizales, Colombia. 1800-2400.
6.110	GSL	London, Gt. Britain, (20.).
6.115	HJ1ABB	Barranguilla Colombia (2)
	OLR2C	Prague, Czecho, (35.).
6.118	XEUZ	Mexico City, D. F. (5.), 2300-0300,
6.120	XEUZ W2XE XFFT	New York, N. Y. (10.).
		Prague, Czecho. (35.), Mexico City, D. F. (5.), 2300-0300, New York, N. Y. (10.), Veracruz, Ver. (.012),
	XEPW YDA5	Mexico City, D. F. 2100-2400.
	YDA5	Mexico City, D. F. 2100-2400. Bandoeng, Java, N.E.I. (1.5),
6.122	HJ3ABX	Bogota, Colombia, 1730-2230
	OAX4P	Huancayo, Peru. (.25), Arequipa, Peru. (.1),
	OAX6A	Arequipa, Peru. (.1).
6.125	CXA4	Montevideo, Uruguay. (1.). 1690-
		2145.
6.128	OAX7A	Cuzco, Peru. (.1).
6.130		Havana, Cuba, (.35), 1700-0100.
	VE9HX	Halifax, N. S. (.5), 1700-2300,
6.137	CR7AA	Lourenco Margues, Port, East
		Africa, Sun. 0600-0900, Weekdays
		0500-0700.
6.138	HJ4ABD	Medellin, Colombia.
6.140	W8XK	Pittsburgh, Pa. (40.). 2000-2400.
6.145	HJ4ABU	Pereira, Colombia. 1800-2200.
6.150	CB615	Santiago, Chile.
	CJRO	Winnipeg, Man. (2.). 1800-2400.
	HI5N	Ciudad Nioca, D. R. (.1), 1900-2000.
	UAAIA	Chiciayo, Feru, (.2), 2000-2300.
6 150	VPB	Colombo, Ceylon. (.3). 0700-1030. Caracas, Venez. 1030-1330; 1530-
6.158	YV5RD	Caracas, Venez. 1030-1330; 1530-
6.174	XEXA	2200.
6.190	HIIA	Mexico City, D. F. 1700-2100.
0.130	IIIA	Santiago de los Caballeros, D. R. (.05). Weekdays 2000-2200.
6.200	COKG	Santiago Cuba (05) Della and
	00.10	Santiago, Cuba. (.05). Daily exc. Sat. 0900-2300.
	HISQ	Trujillo, D. R. 1700-1900.
6.210	YV1RI	Coro, Venez. (.15). 1700-2200.
6.215	TG2	Guatemala City, Guat.
6.230	OAX4G	Lima, Peru. (.4). 1900-2130.
	YV1RG	Valera, Venez, 1730-1930.
6.235	HC2RL	Guayaquil, Ecuador.
	HRD	La Ceiba, Honduras. (.25), 2000-
		2300.
6.243	HIN	Trujillo, D. R. (.75).
6.250	YV5RI	Caracas, Venez.
6.270	YV5RP	Caracas, Venez. (1.2).
6.280	COHB	Sancti-Spiritus, Cuba. (.15). 2100-
		2300.
	HIG	Trujillo, D. R. (.05).
6.300	YV4RD	Maracav, Venez. 1700-2300.
6.315	HIZ	Trulillo, D. R. (.1).
6.340	HIIX	Trujilio, D. R. (.5). Tues., Fri.,
6 252		2000-2200.
6.350	HRP1	San Pedro Sula, Honduras. Maracaibo, Venez. 1900-2400.
6.360	YV1RH	Waracaibo, Venez. 1900-2400.
6.380	YV5RF	Caracas, Venezuela. Caracas, Venezuela.
6.400	TVSRH	Garacas, Venezuela.
6.410	TIPG	San Jose, Costa Rica. (1.). 1800-
	NUMBE	2230.
6.416	YVGRC	Bolivar, Venez.
6.420	HIIS	Santiago, D. R. (.02). 1800-2300.
6.425	OAX4K	Lima, Peru. (.2).
	W3XL	Bound Brook, N. J. (180.). Irrreg.
6.450	HI4V	San Francisco de Macoris, D. R.
6 470	1110.	(.025).
6.479 6.500	HI8A	Trujillo, D. R.

	VVI DM	Menseethe Mense
6.508	Padle 4	Maracaibo, Venez. Guardia Civil, Tetuan, Sp. Morocco.
0.308	Naulo (	Èuardia Civil, Tetuan, Sp. Morocco. 1900–2000. Valencia, Venezuela. 1700–2200. Palma, Majorca, Balearic Isl.
6.520	YV4RB	Volumeia Verteret 1700 com
6.534	EDR/	Valencia, Venezuela. 1700-2200. Palma, Majorca, Balearic Isl. Managua, Nicaragua. Bolivar, Venez. 2100-2300. Trujillo, D. R. (J.025). 1700-2000. Riobamba, Ecuador. Thur. 2100- 2300.
6.540	YNIGG	Managua Nicertaut
6.545	VV6PR	Reliver Venez 2100 Geor
6.555	HIAD	Trulillo D B ( 435) 4700
6.620	Prado	Richamba Ecuador Thus 2000.
		2300.
6.630	ніт	Trubile D D (a) where
		Truljillo, D. R. (.2). Weekdays, 1800-2100. San Jose, Costa Rica. 1600-2300, San Jose, Costa Rica.
6.690	TIEP	San Jose, Costa Rica 1600 2200
6.700	TIVL	San Jose, Costa Rica. 1600-2300.
6.730	HISC	La Romana, D. R. 1745-2000.
6.750	JVT	Nazaki, Janan, (50 \
6.775	нин	San Pedro de Macoris, D. R. (15)
		1900-2000.
6.800	H17P	Trujillo, D. R. 1930-2100.
6.820	XGOX	Nanking, C. K. 1530-2100. Nanking, China. (.5). 0530-0900. Puerto Limon, Costa Rica. (.4). Sun., 1600-1700. Daily 1200-1300. Port Moresby, Papue. Amateur stations.
6.850	TIOW	Puerto Limon, Costa Rica. (.4).
		Sun., 1600-1700. Daily 1200-1300.
6.990	VK8XI	Port Moresby, Papua.
7.000	to 7.300 EA9AH	Amateur stations.
7.034	EA9AH	Tetuan, Sp. Morocco, 1500-1700. Papeete, Tahiti. (.2). Tues., Fri.
7.100	F08AA	Papeete, Tahiti. (.2). Tues., Fri.,
7.200	YNAM	Managua, Nicaragua. 2080-2400.
7.380	XECR	wiexico City, D. F. (20.). Sun.
		1800-2008.
7.797	HBP	Radio Liberte. 1900-2000.
1.131	пвр	Geneva, Switz. (20.). Sat., 1730-
8.400	HC2CW	1030.
8.650		
8.664	COJK	Company Cube (2.4)
8.950	HCJB	Camaguey, Cuba. (2.4). 1800-0100. Quito, Ecuador. (.15). Mon., Wed.,
3.330		Sat., 0200-0400; 1300-1500.
9.125	HAT4	
		Budapest, Hungary. (20.). Sun., Wed., 1900-2000 Set, 1900 1900
9.330	OAX4J	Wed., 1900-2000. Sat., 1800-1900. Lima, Peru. (.2). 1200-1500; 1700-
9.345	HBL	Geneva, Switz. (20.)
9.350	HS8PJ	Bangkok, Siam, Mon. 0720-1000
9.363	COBC	Bangkok, Siam. Mon., 0730-1000. Havana, Cuba.
9.415	PLV	Bandoeng, Java, N.E.L. (80), 1000
		1100.
9.428		Havana, Cuba. (.15). 0700-0100.
9.445	HC2RA	Guayagun, Ecuador, Sun 1600
		1000 D-U. 0400 0000
9.450	HC20DA	2200. Daily 2100-2200. Guatemala City, Guat. (.2), Sun. 0000-0600. Daily 2000-2400.
	TGWA	Guatemala City, Guat. (.2), Sun.
		0000-0600. Daily 2000-2400.
	· · · · · · · ·	FUIL DE FLANCE, Martinique 1100.
9.460	VCOV	1200; 1700-1800.
	XGOX	Nanking, China, (.5),
9 470	PJC1	Willemstad, Curacao, N.W.I. (.15).
9,480	EAR	54n, 1035-1235.
J.460	LAR	Madrid, Spain. (20.). Mon. at 2000;
	XEDQ	Tues, Fri. at 2100.
9.500	EAC	Guadalajara, Jal. 1900-0100. Madrid, Spain.
	HILARE	
	VK3MF	
		Melbourne, Australia. (5.). Daily exc. Sun. 0400-0700.
	XEWW	Mexico City, D. F. (10.). 0800-2400.
9.501	PRF5	Rio de Janeiro, Brazil. (60.). 1645-
9.504	OLR3B	Prague, Czecho, (35.).
9.505	TILS	San Jose, Costa Rica.
	XEFT	Prauue, Czecho. (35.), San Jose, Costa Rica. Veracruz, Ver. (.02). 1930-2400. Daventry, Gt. Britain. (20.), 1215- 1800: 1820-2030. 2230-0456
9.510	GSB	Daventry, Gt. Britain. (20.). 1215-
		1800; 1820-2030; 2330-0145.
	HJU	1800; 1820-2030; 2330-0145. Buenaventura, Colombia. Mon
		Wed., Fri. 2000-2300.
9.520	HJ4ABH	Armenia. Colombia. (1.). 0800-1100:
		1800-2200.
	XEME	Merida, Yuc. (.015).

## SHORTWAVE BROADCASTING STATIONS OF THE WORLD

	_			
		Radio Liberte. 1900-2000. Hong Kong. (2.5). Sat. 2100-2400.		
9,525		days 0400-1000; 2330-0100.	,11.720	CJ TP
9.530	LKJ1 W2XAF	Jeloy, Norway. (1.). 0500-0800. Schenectady, N. Y. (40.). 1600-2400.	11.730	PH Xi
		Neveli Lener (50)	11.740	H
9,535	JZI	Nazaki, Japan. (50.). Berlin, Germany. (8.). 0005-0515;	11.750	G
9.540	NLQ	0555-1100; 1650-2245.		
	VPD2		11.760	o
9.550	OLR3A	Prague, Czecho. (35.).	11.770	Ď.
9.560	ALG	Prague, Czecho. (35.). Berlin, Germany. (8.). 0005-0515; 1650-2245.	11.780	01
9,562	HJ1ABB OAX4T	Barranguilla, Colombia. (.3). Lima, Peru. (10.).	11.780	w
9.565	VUR	Rombay, India, (4.5),	11.790	
9.570	YV3RB	Barquisimeto, Venez. Boston, Mass. (10.). 0630-2400.	11.795	D.
9.570	WSXK	Pittsburgh, Pa. (40.). (Not used),	11.800	C
9.575	HJ2ABC	Cucuta Colombia, (.25).		JZ
9.580	GSC	Daventry, Gt. Britain. (20.). 2100-		0,
		2300.	11.810	12
	VK3LR	Melbourne, Australia. (.5). 0100- 0945.	11.010	
9,585	VK2ME	Sydney, Australia. (20.). Sun. 0000- 0200; 0500-0900; 1130-1330.	11.820	G
9.590	PCJ	U200; 0500-0500; 1130-1350. Huizen, Netherlands. (20.). Sun.		x
3.330	FUJ	1400-1500 Mon. 1900-2000.	11.830	W
		Tues, 1330-1500, Thurs, 1900-2200.		W C
		Perth, Australia. (.5). Weekdays 0600-0800.	11.840	0
	W3XAU	Philadelphia, Pa. (10.). 1100-1900.		_
	W8XAL	Cincinnati, Ohio. (10.). (Under	11.855	D.
		construction).	11.860	G
9.595	HBL	Geneva, Switzerland. (18.). Sat.	11.870	Ŵ
		1720-1920	11.875	ö
	RAN	Moscow, USSR, 1900-2115.	11.880	x
9.600	CB960 Xeyu	Santiago, Chile. 1800-1930. Mexico City, D. F. 1900-2200.	11.885	T
9.605	HPSJ	Panama City, Panama. (1.). 1830-		н
		2300.	11.895 11.900	0
9,610	YDB	Soerabaja I, Java, N.E.I. (1.). Cartagena, Colombia. (.75). 1700-	TTOPA	ž
9,618	HJIABP	2300.	11.955	п
9,635	12R0	Roma Italy, (25.).	11.970	н
9.645	HH3W	Port-au-Prince, Haiti. (.03). 1300-	12.000	R
		1400: 1900-2000.	12.000	n
9.650	CT1AA	Lisbon, Portugai. (2.). Tues., Thurs., Sat., 1600–1900.		
9.660	CR6AA	Lobito, Angola, Port. West Africa.	12.120 12.235	Ť
		(.5), Wed., Sat., 1445-1645.	12.233	•
	LRX	Buenos Aires, Argentina. (5.). 1030-2430.	12.290	G
9.670	TI4NR	Heredia, Costa Rica. 2100-2200;	12.295	C
		1120 2400	13.635	S
9,750		Havana, Cuba. 0700-0100. Madrid, Spain. (20.).	14.000	to
9.860		Madrid, Spain. (20.). Lisbon, Portugal. (5.). 1900-2000.	14.358	
9.940 10.065		Macau, Portuguese China.	15.040	
10.085	CQN	Communistic Station.	15.116	
10.260	PMN	Bandoeng, Java, N.E.I. (1.5). 0530-	15.120	
		1100.	15.140	G
10.330	ORK	Brussels, Belgium. (11.). 1330-1500.	15.150	h
10.370	EAJ43	Santa Cruz de Tenerife, Canary Isl. Sat. 1700-1800.	15.160	
10.430		Pirate station announcing "Radio	15.175	
		Milan."	15.180	
10.660	JVN	Nazaki, Japan. (50.). Santiago, Chile. (4.).		
10.670 10.740		Nazaki, Japan. (50.).		
10.740		Bangkok, Siam. (5.).	15.190	2
11.000		Randoeng, Java, N.E.I. (1,5).		
11.040		Lisbon, Portugal. (5.). 1500-1900.		
11.402	HBO	Geneva, Switz.	15.200	E
11.450	COCX	Havana, Cuba. Sun. 1800-2100. Other days 0800-2400.		
11.698	SBG	Motala, Sweden. (.5). 0100-0130.	15.210	
11.710	XEWB	Guadalajara, Jal.	15.220	P
11,718	CR7BH	Lourenco Marques, Port. East		

		Africa. (.2), Sun. 0530-0700, Other
.720	CJRX TPA4	days 0430-0630. Winnipeg, Man. (2.). 1800-2400. Pontoise, France. 0615-1300.
.730	PHI	Hilversum, Netherlands. (23.6). Villahermosa, Tab.
.740	HP5L	
.750	GSD	David, Panama. (.35). Daventry, Gt. Britain. (20.). 2330-
		0145; 1215-1600; 1820-2030; 2100-
.760	OLR4B	2300. Prague, Czecho. (35.). Berlin, Germany. (8.). 1135-1630;
.770	DID	
.780 L.790	OER2 W1XAL	Vienna, Austria. (1.5). Daily exc. Sun. 0900-1800. Boston, Mass. (10.). Sun. 1530-1800
L.795	DIO	Other days 1600-1730. Berlin, Germany, (8,),
L.800	COGF	Matanzas, Cuba. 0700-2400.
	JZJ	Nazaki, Japan. (50.). 1500-1600; 1630-1730; 0800-0900. Ica, Peru. (.1). 1600-2230.
	OAX5A	Ica, Peru. (.1). 1600-2230.
1.810	12 <b>RO</b>	Lca, Peru. (.1). 1600-2230. Rome, Italy. (25.). Sun. 0645-1800. Mon., Wed., Frl. 0645-1930. Tues., Thurs., Sat. 0645-1945. Daventry, Gt. Britain.   Hermosillo, Son. (.15). 2100-2400. New York, N. Y. (10.). 1800-2300. Obligated 10. (20).
	GSN	Thurs., Sat. 0043-1343.
1.820	XEBR	Hermosillo, Son. (.15). 2100-2400.
L.830	W2XE W9XAA	New York, N. Y. (10.). 1800-2300. Chicago, III. (20.).
L.840	CSW	Lisbon, Portugal. (5.).
	OLR4A	New York, N. T. (20.), 1800-2300. Chicago, Ill. (20.), Lisbon, Portugal. (5.), Prague, Czecno. (35.), Mon., Thurs., 1900-2300. Daily 1430-1630. Berlin, Germany. (8.), Daily 1430-1630.
1.855	DJP	Berlin, Germany. (8.).
1.860	GSE YDB	Daventry, Gt. Britain. (20.).
1.870	W8XK	Berlin, Germany. (6.). Daventry, Gt. Britain. (20.). Soorabaja I, Java, N.E.I. (1.). Pittsburgh, Pa. (40.). 1700-2000.
1.875	OLR4C	Prague, Czecho. (35.).
1.880	XEXA	Prague, Czecho. (35.). Mexico City, D. F. (.1). Pontoise, France. 0200-0500; 1215-
1.885	TPA3	1800.
1.895	HP51	Aguadulce, Panama. 1930-2130.
1.900	OLR4D XEWI	Prague, Czecho. (35.). Mexico City, D. F. (.25). 1930-2400.
1.955	IUC	Addie Ababa, Ethiopia,
1.970	HI2X	Trujilio, D. R. (.5). Tues., Pri., 2000-2200.
2.000	RNE	Moscow, USSR. (20.). Sun. 1000-
		1100. Sun., Wed., 0600-0700. Sun., Mon., Wed., Fri., 1600-1700.
2.120	TFJ	Algiers, Algeria. Reykjavik, Iceland. (7.5). Sun.,
2.235	GBU	1345-1430. Rugby, Gt. Britaln.
2.290 2.295	CB615	Santiago, Chile,
3.635	SPW	Santiago, Chile. Warsaw, Poland. (10.). Mon.,
4 800	to 14.400	Wed., Fri., 1230-1330. Amateur Stations.
4.358	HBJ	Geneva, Switz. Sat. 1845-2100.
5.040	RKI	Moscow, USSR. 1900-2115.
5.116	OLR5C	Prague, Czecho. (35.).
5.120	HVJ GSF	Amateur Stations. Geneva, Switz. Sat. 1845-2100. Moscow, USSR. 1900-2115. Prayue, Czecho. (35.). Vatican City. (10.). 1000-1030. Daventry, Gt. Britain. (15.). 1215-
5.140		1600: 2100-2300.
5.150	YDC Jzk	Bandoeng, Java, N.E.I. (3.). Nazaki, Japan. (50.). 0030-0130;
15.160		0800-0900; 1500-1600; 1630-1730.
15.175	RV96 GSO	Moscow, USSR, Daventry, Gt. Britain. 2330-0145; 0545-0855: 0915-1200; 1215-1600;
13.180	630	1820 2020
15.190	ZB4W	Hong Kong, (2.5), Sat, 2100-2400,
		Sun. 0000-0100; 0300-0930. Other days 0400-1000: 2330-0100.
15.200	DIB	Berlin, Germany. (8.). Sun. 1110- 1225. Daily 0005-0515; 0555-1100;
		1650-2245.
15.210		Pittsburgh, Pa. (40.). 0700–1700. Huizen, Netherlands. (20.). Tues.
15.220	PCJ	Huizen, Netherlands. (20.). Tues. 0430-0600.

## SHORTWAVE BROADCASTING STATIONS OF THE WORLD

12.290 15.300 15.310 15.320	LRU XEBM GSP OLR5B	0815-1100; 1650-2245. Buenos Aires, Arg. (5.). 0800-1000. Mazatlan, Sin. 1000-2300. Daventry, Gt. Britain. 1820-2030. Prague, Czecho. (35.).	19.020 21.450 21.460 21.470	HS8PJ Olr6a W1XAL GSH	0145; 0545-0855; 0915-1200; 1215- 1800. Bangkok, Slam. Prague, Czecho. (35.), Boston, Mass. (10.).
15.330 15.340	W2XAD DJR	Schenectady, N. Y. (25.). 1000-2008. Berlin, Germany. (8.). 0800-0900; 1650-2245.	21.470 21.480 21.520	W2XAD W2XE	Daventry, Gt. Britain. 0545-0855; 0915-1200. Schenectady, N. Y. (25.). New York, N. Y. (10.). Sun., 0700-
15.370 15.440	HAS3 Xebm	Budapest, Hungary. (20.). Sun. 0900-1000. Mazatlan, Sin. (.05). 1000-2300.		GSJ	0900. Weekdays 0630-0900. Daventry, Gt. Britain. 0545-0855; 0915-1200.
17.310 17.760	W3XL DJE W2XE	Bound Brook, N. J. (20.), Berlin, Germany. (8.), Sun. 1110- 1225. Daily 0005-0515; 0555-1100. New York, N. Y. (10.).	21.540 21.550 26.100 28.000 t	W8XK GST GSK 0 30.000	Pittsburgh, Pa. (40.). 0445-0700. Daventry, Gt. Britain. Daventry, Gt. Britain. Amateur Stations.

## POLICE STATIONS OF NORTH AMERICA

The power in kilowatts is given in parentheses.

	1.610		1.666		Hantford Md
WOPC	Chicago, Ill. (1.)	WMP	Framingham.	•••••	Hartford, Md. (.25)
WOPD	DuQuoin, Iil. (1.)		Mass. (1.)		W. Palm Beach.
WQPF	Effingham, Ill.	WPEL	W. Bridgewater,	•••••	Fla. (.25)
	(1.)		Mass. (1.)		
WQPG	Sterling, Ill. (1.)	WPEV	Portable in Mass.	•••••	Portable in Md.
WQPM	Macomb, Ill. (1.)		(.05)		(.25)
WQPP	Pontiac, III. (1.)	WPEW	Northampton.		1.706
WOPS	Springfield, Ill.		Mass. (1.)	KGPC	St. Louis, Mo.
	(1.)		Nantucket, Mass.	KOHZ	Portable in Ore.
WQPX	Portable in Ill. (.5)		(.02)		(.01)
			Oak Bluffs, Mass.	WKDU	Cincinnati, Ohio
	1.626		(.02)	WPET	Lexington, Ky.
	Charlestown, W.				1.710
	Va. (1.)	KGHK	1.674	CZ6F	Hamilton, Ont.,
	1.630	RGHK	Palo Alto, Calif.		Canada
WEY	Boston, Mass.	KGZT	(.02)		1.712
	(Fire)	AG21	Santa Cruz, Calif.	COL2	
WKDT	Detroit, Mich.	KIUK	(.1)	KACU	Havana, Cuba
	(Fire)	KIUK	Jefferson, Mo.	AACO	Longview, Texas
WNYF	New York, N. Y.		(2.5 kw day, 1 kw	KADM	(.25)
	(.5) (Fire)	WPSP	nite)	<b>LADM</b>	Gainesville. Texas
	1.634	wPSP	Harrisburg, Pa.	KADT	(.05)
WPHE	Marion County,		(1.)	LADI	Marshall, Texas
	Ind. (1.)		1.682	KGHY	(.05)
WPHS	Culver, Ind. (1.)	KACC	Fairfield, Iowa	AGH I	Whittier, Calif. (.05)
WPHU	Jasper, Ind. (1.)		(.5)	KGJX	
WQFE	Seymour, Ind. (1.)	KACD	Atlantic, Iowa (.5)	ROJA	Pasadena, Calif.
WQFW	Columbia City	KAPI	Grass Valley, Cal.	KGPJ	(.04)
	Ind. (1.)	KGHO	Des Moines, Iowa	PGL	Beaumont, Texas
	Reno, Nev. (1.)	KNFN	Waterloo, Iowa	KGPL	(.1)
	• •		(.4)	KGPL	Los Angeles, Cal.
	1.642	KNFO	Storm Lake, Iowa	POLO	Honolulu, T. H.
WRDH	Houghton Hghts.,		(.4)	KGPR	(.5)
	Mich. (5 kw day,		1.692	KOPK	Fort Worth,
	1 kw nite)	WQFT	Portable in Ohio	KGZB	Texas
WRDP	Paw Paw, Mich.		(.1)	KGZL	Houston, Texas
	(1.)		1.698	KGZQ	Shreveport, La.
WRDS	E. Lansing, Mich.	KNGG	Phoenix, Arlz. (.1)	KGZY	Waco, Texas
	(5 kw day, 1 kw	WAKJ	Duval County.	KGA I	San Bernardino,
	nite)		Fla. (.35)	KNFJ	Calif. (.05)
	1.658	WDSP	Del.	LULI	Pomona, Calif,
KNHD	Redwood Falls,	WMSC	Cumberland, Md.	KNOF	(.05)
	Minn. (.4)		(.25)	KNGE	Cleburne, Texas
KSW	Berkeley, Calif.	WMSE	Easton, Md. (.25)	KNGL	(.05)
WPGC	S. Schenectady.	WMSF	Frederick, Md.	LNGL	Galveston, Texas
	N.Y. (5 kw day,		(.25)	ENCY	(.05)
	1 kw nite)	WMSW		KNGX	Los Angeles,
		** 1*1.3 **	manuol1, MQ. (.20)		Calif. (portable)

## POLICE STATIONS OF NORTH AMERICA

KNHF	Denton, Texas
KSBC	(.05) San Bernardino; Calif (5)
	Dallas (Davag ( 5)
KVP VYR	Calif. (.5) Dallas, Texas (.5) Montreal, P. Q.
WAKF	(.4) Everett, Mass.
WAKY	(.05) Fall River, Mass.
WMPH	(.05) Newport, R. I.
WPDB WPDC WPDD	(.05) Chicago, III. Chicago, III. Chicago, III.
WPDC	Chiengo 11
WDDD	Chicago, Ill
WEDD	Cincago, in.
WPDU	Pittsburgh. Pa.
WPED	Pittsburgh, Pa. Arlington, Mass. Somerville, Mass.
WPEH	Somerville, Mass.
WPEI	E Providence.
	E. Providence, R. I.
WPFA	Newton, Mass.
WPFN	Fairhaven, Mass. Providence, R. I.
WPGF	Providence, R. I.
WPGU	Cohasset Mass.
WPGV	Boston, Mass. (.5)
WPHG	Medford, Mass.
wPhG	(.05) Warren, R. I. (.04) Oak Park, Ill. (.05)
WPIA	Warren, R. I. (.04)
WQFL	Oak Park, Ill. (.05)
WQFX	Waukegan, Ill.
	(.1)
·····	Brockton, Mass. (.05)
CYQ	2.318 Toronto, Ont. (.4)
0750	2.366
CZ50	Ottawa, Ont.
WAKC	Freehold, N. J.
	(.1)
	2.382
KGHT	Brownsville, Tex.
	( 025)
KGHV	Corpus Christi, Tex. (.05)
KNFE	Duluth, Minn,
<b>WNHB</b>	Duluth, Minn. Green Bay, Wis.
WAKE	Oshkosh, Wis. (.1) Elkhorn, Wis. (.1) Auburn, N. Y.
WMPE	Elkhorn, Wis. (.1)
WPDN	Auburn, N. Y.
WPEA	Syracuse, N. Y.
WPEA WPFM	Birmingham, Ala.
	(.4)
WPG₩	Mobile, Ala. (.4)
	2.390
·CGZ	Vancouver, B. C.
~ ***	(.4)
·CJ₩	(.4) St. John, N. B. (.015)
·CJZ	Verdun, P. Q. (.02)
	2.396
	Winning Man
VYW	Winnipeg, Man.
	(.6)
	2.406
KGHZ	Little Rock, Ark.
KGPW	2.406 Little Rock, Ark. Salt Lake City,
NOT W	Utah
DZ NINT TO	Wast Smith Ank
KNHE	Fort Smith, Ark. (.1)
	2.414
	2.414
KACE	Olympia, Wash,
	(.05)
KACJ	Wenatchee, Wash. (.25)
	Wash. (.25)
KACK	Bellingham,
	Wash. (.05)
KACN	Ventura, Calif.

KACO	Tracy, Calif.
KACS	(.015) Bakersfield, Calif.
KACV	(.5) Walla Walla, Wash. (.05) Port. Orchard.
KADL	
KAPH	Wash. (.05) Stockton, Calif.
KAPL	(.5) Hoquiam, Wash.
KGHS	(.05) Spokane, Wash.
KGHW	(.1) Centralia, Wash. (.05)
KGPA KGPF	Seattle, Wash. Santa Fe, N. Mex. (.025)
KGPS	(.023) Bakersfield, Calif. (.05)
KGZA	
KGZM	Fresno, Calif. (.5) El Paso, Texas Tacoma, Wash.
KGZN	Tacoma, Wash.
KGZO	Calif.
KGZV	Aberdean, Wash. (.125) Albuquerque, N.
KGZX	Mex.
KNFA	Clovis, N. Mex. (.05) Mt. Vernon,
KNFI	Wash. (.05)
KNFP	Everett, Wash. (.05)
KNGU	Yakima, Wash. (.1) Lodi, Calif. (.04) Herkimer, N. Y.
KNGY WAKN	(.05)
WCK	Detroit. Mich.
WMO	Detroit, Mich. Highland Park, Mich.
WPDA	Tulare, Calif. (.15) Passaic, N. J. Detroit, Mich. Atlanta, Ga. (.4)
11/DDT	Passaic, N. J.
WPDY	Detroit Mich
WPDY WPFH WPFI	Atlanta Ga (4)
WDEU	Bultimore Md
WIFI	Baltimore, Md. Columbus, Ga.
WPGH	(.05)
	(.3) Utica, N. Y. (.1) La Grange, Ga. (.05)
WPGJ WPGM	La Grange, Ga. (.05)
WQFB	Macon Ga (05)
WQFJ	Macon, Ga. (.05) Oneonta, N. Y. (.05)
WQFV	(.00) Augusto Ga (25)
WRDR	Augusta, Ga. (.25) Grosse Pointe, Mich.
•••••	Modesto, Calif.
• • • • •	(.25) Wayeross, Ga. (.05)
KACA	2.422 Atchison, Kans.
	(.05)
KACI KADS	Eureka, Calif. (.1) Marysville, Calif.
	(.05)
KGPE	(.05) Kansas City, Mo. Vallejo, Calif. Topeka, Kans.
KGPG	vailejo. Gain.
KGPE KGPG KGZC KNGF	LODERA, MAUS.
	Sacramento. Calif. (.5)
KNGV	Salina, Kans. (.05)
KNGV WMJ	Buffalo, N. Y. (.5)
WNFP	Calif. (.5) Salina, Kans. (.05) Buffalo, N. Y. (.5) Niagara Falls,

N. Y. (.135) WPDR Rochester, N. Y Washington, D.C. WPDW Portland, Me. Nashua, N. WPFU WPHB H. (.05)Willows, Calif. ..... (.05) 2.430 KGPB Minneapolis, Minn. (.5) KGZJ Phoenix, Ariz. KNGP Shreveport, La. (.1) KNHG Prescott, Ariz. (.01) WAKH Bloomfield, N. J. (.05) Baton Rouge, La. WAME (.05) Baton Rouge, La WBRP (.25) WCPD Charleston, S. C. (.05) WPDI Columbus, Ohio Dayton, Ohio WPDM WPDS St. Paul, Minn. WPEK New Orleans, La. (.25) Highland Park, WPFD IR. Hackensack, N. J. WPFK (.5) WPGI Portsmouth, Ohio (.1) WPHO Zanesville, Ohio (.05) WQFO Lancaster, Ohio (.05)Ashland, Ky. (.2) WSAG Rock Hill, S. C. . . . . . . (.05) 2.442 KASD San Angelo, Tex. (.05)Austin, Texas (.1) KGHU KGPP Portland, Ore. KGPX Denver, Colo. KGZH Klamath Falls. Ore. Salem, Ore. (.05) Fargo, N. Dak. KGZR KNHM (.1) WAKO Ft. Lauderdale. Fla. (.05) Connersville, Ind. WAMB (.04) Kalamazoo, Mich. WAMG (.1) WMDZ Indianapolis, Ind. WPDE Louisville, Ky. WPDF Flint, Mich. Richmond, Ind. WPDH Lansing, Mich. Grand Rapids, WPDL WPEB Mich. (.5) WPES Saginaw, Mich. WPFC Muskegon, Mich. WPFE Reading. Pa. WPFG Jacksonville, Fia WPFT Lakeland, Fla. (.05) WPFX Paim Beach, Fla. (.05) WPFY Yonkers, N. Y. (.4)Miami, Fla. (.5) WPFZ WPGL Binghamton, N. Y. (.4) Muncic, Ind. (.1) WPGP

## POLICE STATIONS OF NORTH AMERICA

	10
WPHM WQFM	Orlando, Fla. (.05) Wilkes-Barre, Pa.
WQFQ	(.1) Lafayette, Ind. (.05)
	Anderson, Ind. (.1)
	Elwood, Ind.
	(.05) Miami, Fla. (.04) York, Pa. (.04) 2.450
KACF	Chickasha, Okla. (.05)
KACL KACP	Altus, Okla. (.05) Ponca City, Okla. (.05)
KACR	Seminole, Okla. (.05)
KADQ KAPB	Hilo, Hawaii (.1) Cushing, Okla. (.05)
KAPC	Drumwright, Okla. (.05)
KAPD	Eldorado, Kans.
KAPE KAPF	(.05) Norman, Okla. (.1) Okmulgee, Okla.
KARD	(.05) Ardmore, Okia.
KGHN	(.05) Hutchinson, Kans. (.05)
KGHP	Lawton, Okla.
KGPH	(.05) Oklahoma City,
KGPO KGPZ	Okla. Tulsa, Okla. Wichita, Kans.
KGZF	(.25) Chanute, Kans. (.025)
KGZP KNGK	(.025) Coffeyville, Kans. Duncan, Okla. (.05)
KNGM	Rapid City, S. Dak. (.05)
KNGT	Muskozee Okla
KNHC KVPB	(.05) Ada, Okla. (.05) Huron, S. Dak. (.04)
KWCM	Shawnee, Okla.
WPDK WPEE	(.1) Milwaukee, Wis. Brooklyn, N. Y. Bronx, N. Y. New York, N. Y. Kenosha, Wis. (.1)
WPEF	Bronx, N. Y.
WPEG	Bronx, N. Y. New York, N. Y. Kenosha, Wis. (.1)
WPEP WPHF	Dichmond Ve
WQFG WQ <b>FH</b>	(.15) Roanoke, Va. (.1) Lynchburg, Va.
WQFI	(.05) Petersburg, Va. (.25)
KACM	2.458 Big Spring, Texas
KADR	(.05) Abilene, Texas
KGZI	(.04) Wichita Falls, Texas (.2) Lubbock, Texas
KGZW	Lubbock, Texas
KNFB	(.15) Idaho Falis, Idaho (.5)
KNGW	Brownwood,
WAMN	Texas (.05) Lorain, Ohio (.05)

" ASD	Decatur, III. (.1)
WASB WPDG	Decatur, III. (.1) Youngstown, O. (.25)
	(.25)
WPDO	Akron, Ohio (.25) Charlotte, N. C.
WPDV	Charlotte N C
	(.25)
WPFS	
WITS	Asheville, N. C.
	(.5)
WPGD	Rockford, Ill.
WPHD	Steubenville, O.
	(.1)
WQFZ	Ottawa III (5)
WRBH	Cleveland, Ohio
	Clinton III (04)
	Cleveland, Ohio Clinton, Ill. (.04) Urbana, Ill. (.04)
1	
VICON	2.466
KGOZ	Cedar Rapids, Iowa (.05) San Francisco,
	Iowa (.05)
KGPD	San Francisco,
	Calif
KGPI	Omaha, Nebr. (.4) Sioux City, Iowa San Jose, Calif.
KGPK	Sioux City, Iowa
KGPM	San Jose Cullt
KGPN	Dan Jose, Cam,
KGZG	Davenport, Iowa Des Moines, Iowa
	Des Moines, Iowa
WAKB	New London,
	New London, Conn. (.05)
WAKG	Clearwater, Fla.
	(.05) Memphis, Tenn. Woonsocket, R. I. Pawtucket, R. I.
WPEC	Memphis Tenn
WPEM	Woonsocket R I
WPFV	Pawtucket, R. I.
WPFW	Dridgenent
	Drugeport,
WPGA	Conn. (.03)
WFGA	Bay City, Mich.
WPGB	PortHuron, Mich.
WPGK	
(	
WPGX	Worcester, Mass.
	(.1)
WPHA	(.1) Fitchburg, Mass.
	(.05)
WPHN	Tampa, Fla. (.1)
WPHP	Jackson, Mich.
WPHP	Jackson, Mich.
	Jackson, Mich, (.05)
WPHP WQFA	Jackson, Mich, (.05)
WQFA	Jackson, Mich, (.05)
	Jackson, Mich, (.05) New Haven, Conn. (.1) Gainsville, Fla.
WQFA WQFC	Jackson, Mich, (.05) New Haven, Conn. (.1) Gainsville, Fla. (.05)
WQFA	Jackson, Mich, (.05) New Haven, Conn. (.1) Gainsville, Fla, (.05) Clearwater, Fla,
WQFA WQFC	Jackson, Mich, (.05) New Haven, Conn. (.1) Gainsville, Fla. (.05) Ciearwater, Fla. (.05)
WQFA WQFC	Jackson, Mich, (.05) New Haven, Conn. (.1) Gainsville, Fla. (.05) Clearwater, Fla. (.05) Waterbury.
WQFA WQFC WQFK	Jackson, Mich, (.05) New Haven, Conn. (.1) Gainsville, Fla. (.05) Clearwater, Fla. (.05) Waterbury.
WQFA WQFC WQFK	Jackson, Mich, (.05) New Haven, Conn. (.1) Gainsville, Fla. (.05) Clearwater, Fla. (.05) Waterbury, Conn. (.05) 2.474
WQFA WQFC WQFK	Jackson, Mich, (.05) New Haven, Conn. (.1) Gainsville, Fla, (.05) Clearwater, Fla, (.05) Waterbury, Conn. (.05) 2,474 Las Vegas, Nev.
WQFA WQFC WQFK 	Jackson, Mich, (.05) New Haven, Conn. (.1) Gainsville, Fla. (.05) Clearwater, Fla. (.05) Waterbury, Conn. (.05) 2.474 Las Vegas, Nev. (.05)
WQFA WQFC WQFK  KNHG	Jackson, Mich, (.05) New Haven, Conn. (.1) Gainsville, Fla. (.05) Clearwater, Fla. (.05) Waterbury, Conn. (.05) 2.474 Las Vegas, Nev. (.05)
WQFA WQFC WQFK 	Jackson, Mich, (.05) New Haven, Conn. (.1) Gainsville, Fla. (.05) Clearwater, Fla. (.05) Waterbury, Conn. (.05) 2.474 Las Vegas, Nev. (.05)
WQFA WQFC WQFK  KNHG	Jackson, Mich, (.05) New Haven, Conn. (.1) Gainsville, Fla. (.05) Clearwater, Fla. (.05) Waterbury, Conn. (.05) 2.474 Las Vegas, Nev. (.05)
WQFA WQFC WQFK  KNHG KGHM KNFH	Jackson, Mich, (.05) New Haven, Conn. (.1) Gainsville, Fla. (.05) Clearwater, Fla. (.05) Waterbury, Conn. (.05) 2.474 Las Vegas, Nev. (.05)
WQFA WQFC WQFK  KNHG	Jackson, Mich, (.05) New Haven, Conn. (.1) Gainsville, Fla. (.05) Clearwater, Fla. (.05) Waterbury, Conn. (.05) 2.474 Las Vegas, Nev. (.05)
WQFA WQFC WQFK  KNHG KGHM KNFH	Jackson, Mich, (.05) New Haven, Conn. (.1) Gainsville, Fla. (.05) Clearwater, Fla. (.05) Waterbury, Conn. (.05) 2.474 Las Vegas, Nev. (.05) Reno, Nev. (.05) Reno, Nev. (.05) Garden City, Kans. (.05)
WQFA WQFC WQFK  KNHG KGHM KNFH	Jackson, Mich, (.05) New Haven, Conn. (.1) Gainsville, Fla, (.05) Clearwater, Fla, (.05) Waterbury, Conn. (.05) 2.474 Las Vegas, Nev. (.05) Reno, Nev. (.05) Garden City, Kans. (.05) Dodge City, Kans. (.05) Sandusky, Ohio (.05)
WQFA WQFC WQFK  KNHG KNHH KNGH WAKI	Jackson, Mich, (.05) New Haven, Conn. (.1) Gainsville, Fla, (.05) Clearwater, Fla, (.05) Waterbury, Conn. (.05) 2.474 Las Vegas, Nev. (.05) Reno, Nev. (.05) Garden City, Kans. (.05) Dodge City, Kans. (.05) Sandusky, Ohio (.05)
WQFA WQFC WQFK  KNHG KNHG KNFH KNFH KNGH WAKI WPDP	Jackson, Mich, (.05) New Haven, Conn. (.1) Gainsville, Fla, (.05) Clearwater, Fla, (.05) Waterbury, Conn. (.05) 2.474 Las Vegas, Nev. (.05) Reno, Nev. (.05) Garden City, Kans. (.05) Dodge City, Kans. (.05) Sandusky, Ohio (.05)
WQFA WQFC WQFK  KNHG KNHH KNGH WAKI WPDP	Jackson, Mich, (.05) New Haven, Conn. (.1) Gainsville, Fla, (.05) Clearwater, Fla. (.05) Waterbury, Conn. (.05) 2.474 Las Vegas, Nev. (.05) Reno, Nev. (.05) Garden City, Kans. (.05) Dodge City, Kans. (.05) Sandusky, Ohio (.05) Philadelphia, Pa, Knosville, Tenn.
WQFA WQFC WQFK  KNHG KNHH KNFH WNFN WPFO WPFO	Jackson, Mich, (.05) New Haven, Conn. (.1) Gainsville, Fla. (.05) Clearwater, Fla. (.05) Conn. (.05) 2.474 Las Vegas, Nev. (.05) Garden City, Kans. (.05) Dodge City., Kans. (.05) Dodge City., Kans. (.05) Philadeiphia, Pa., Knosville, Tenn. Swarthmore, Pa.
WQFA WQFC WQFK  KNHG KNHH KNGH WAKI WPDP	Jackson, Mich, (.05) New Haven, Conn. (.1) Gainsville, Fla, (.05) Ciearwater, Fla. (.05) Waterbury, Conn. (.05) 2,474 Las Vegas, Nev. (.05) Garden City, Kans. (.05) Garden City, Kans. (.05) Sandusky, Ohio (.05) Philadelphia, Pa, Knosville, Tenn. Swarthmore, Pa. Asbeville, N. C.
WQFA WQFC WQFK  KNHG KNHG KNFH KNGH WAKI WPFO WPFQ WPFS	Jackson, Mich, (.05) New Haven, Conn. (.1) Gainsville, Fla. (.05) Clearwater, Fla. (.05) Conn. (.05) 2.474 Las Vegas, Nev. (.05) Garden City, Kans. (.05) Dødge City., Kans. (.05) Dødge City., Kans. (.05) Sandusky, Ohio (.05) Fhiladelphia, Pa., Knosville, Tenn. Swarthmore, Pa.
WQFA WQFC WQFK  KNHG KNHH KNFH WNFN WPFO WPFO	Jackson, Mich, (.05) New Haven, Conn. (.1) Gainsville, Fla. (.05) Clearwater, Fla. (.05) Conn. (.05) 2.474 Las Vegas, Nev. (.05) Garden City, Kans. (.05) Dødge City., Kans. (.05) Dødge City., Kans. (.05) Sandusky, Ohio (.05) Fhiladelphia, Pa., Knosville, Tenn. Swarthmore, Pa.
WQFA WQFC WQFK  KNHG KNHG KNGH WNGH WPFO WPFO WPFQ WPFS WPFS	Jackson, Mich, (.05) New Haven, Conn. (.1) Gainsville, Fla. (.05) Clearwater, Fla. (.05) Clearwater, Fla. (.05) Waterbury, Conn. (.05) 2.474 Las Vegas, Nev. (.05) Reno, Nev. (.05) Garden City, Kans. (.05) Dodge City, Kans. (.05) Philadeiphia, Pa. Knosville, Tenn. Swarthmore, Pa. Asheville, N. C. (.5) Johnson City, Tenn. (.05)
WQFA WQFC WQFK  KNHG KNHG KNFH KNGH WAKI WPFO WPFQ WPFS	Jackson, Mich, (.05) New Haven, Conn. (.1) Gainsville, Fla. (.05) Clearwater, Fla. (.05) Clearwater, Fla. (.05) Vaterbury, Conn. (.05) 2.474 Las Vegas, Nev. (.05) Garden City, Kans. (.05) Dodge City, Kans. (.05) Dodge City, Kans. (.05) Philadeiphia, Pa. Knoxville, Tenn. Swarthmore, Pa. Asheville, N. C. (.5) Johnson City, Tenn. (.05) Elizabethton,
WQFA WQFC WQFK  KNHG KNHH KNGH WNGH WPFO WPFO WPFO WPFO WPFO WPFO WPFO WPFO	Jackson, Mich, (.05) New Haven, Conn. (.1) Gainsville, Fla, (.05) Ciearwater, Fla. (.05) Waterbury, Conn. (.05) 2,474 Las Vegas, Nev. (.05) Garden City, Kans. (.05) Bodge City, Kans. (.05) Philadelphia, Pa, Knosville, Tenn. Swarthmore, Pa. Asheville, N. C. (.5) Johnson City, Tenn. (.05) Elizabethton, Tenn. (.1)
WQFA WQFC WQFK  KNHG KNHG KNGH WNGH WPFO WPFO WPFQ WPFS WPFS	Jackson, Mich, (.05) New Haven, Conn. (.1) Gainsville, Fla. (.05) Clearwater, Fla. (.05) Conn. (.05) 2.474 Las Vegas, Nev. (.05) Garden City, Kans. (.05) Dodge City., Kans. (.05) Dodge City., Kans. (.05) Sandusky, Ohio (.05) Philadelphia, Pa., Knosville, Tenn. Swarthmore, Pa. Asheville, N. C. (.5) Johnson City, Tenn. (.05) Elizabethton, Tenn. (.1) Mansfield, Ohio
WQFA WQFC WQFK  KNHG KNHH KNGH WNGH WPFO WPFO WPFO WPFO WPFO WPFO WPFO WPFO	Jackson, Mich, (.05) New Haven, Conn. (.1) Gainsville, Fla. (.05) Clearwater, Fla. (.05) Conn. (.05) 2.474 Las Vegas, Nev. (.05) Garden City, Kans. (.05) Dodge City., Kans. (.05) Dodge City., Kans. (.05) Sandusky, Ohio (.05) Philadelphia, Pa., Knosville, Tenn. Swarthmore, Pa. Asheville, N. C. (.5) Johnson City, Tenn. (.05) Elizabethton, Tenn. (.1) Mansfield, Ohio
WQFA WQFC WQFK KNHG KNHG KNHH KNGH WAKI WPAN WPFS WPFS WPFS WPFS WPFS WPFS	Jackson, Mich, (J05) New Haven, Conn. (.1) Gainsville, Fla. (J05) Clearwater, Fla. (J05) Clearwater, Fla. (J05) Conn. (J05) 2.474 Las Vegas, Nev. (J05) Garden City, Kans. (J05) Garden City, Kans. (J05) Sandusky, Ohio (J05) Philadelphia, Pa. Knoxville, Tenn. Swarthmore, Pa. Asheville, N. C. (J5) Elizabethton, Tenn. (J) Mansfield, Ohio (J05)
WQFA WQFC WQFK  KNHG KNHH KNGH WNGH WPFO WPFO WPFO WPFO WPFO WPFO WPFO WPFO	Jackson, Mich, (.05) New Haven, Conn. (.1) Gainsville, Fla, (.05) Clearwater, Fla. (.05) Clearwater, Fla. (.05) Waterbury, Conn. (.05) 2.474 Las Vegas, Nev. (.05) Reno, Nev. (.05) Garden City, Kans. (.05) Dodge City, Kans. (.05) Philadelphia, Pa. Knosville, Tenn. Swarthmore, Pa. Asheville, N. C. (.5) Johnson City, Tenn. (.1) Mansfield, Ohio (.05) Toledo, O. (.4)
WQFA WQFC WQFK KNHG KNHG KNHH KNFH WNFN WPFO WPFO WPFO WPFO WPFO WPFO WPFY WPFS WPGZ WPHY WQFY WQFY	Jackson, Mich, (J05) New Haven, Conn. (.1) Gainsville, Fla. (J05) Clearwater, Fla. (J05) Clearwater, Fla. (J05) Conn. (J05) 2.474 Las Vegas, Nev. (J05) Garden City, Kans. (J05) Dodge City, Kans. (J05) Dodge City, Kans. (J05) Didge City, Kans. (J05) Didge City, Kans. (J05) Didge City, Kans. (J05) Didge City, Kans. (J05) Didge City, Kans. (J05) Elizabethde, N. C. (J5) Johnson City, Tenn. (J) Mansfield, Ohio (J05) Toledo, O. (J4) 2.482
WQFA WQFC WQFK KNHG KNHG KNHG KNGH WAKI WPGP WPFQ WPFQ WPFQ WPFQ WPFQ WPFY WPFY WPGZ WPHY KQZE	Jackson, Mich, (.05) New Haven, Conn. (.1) Gainsville, Fla, (.05) Ciearwater, Fla. (.05) Waterbury, Conn. (.05) 2,474 Las Vegas, Nev. (.05) Garden City, Kans. (.05) Garden City, Kans. (.05) Sandusky, Ohio (.05) Philadelphia, Pa, Knosville, Tenn. Swarthmore, Pa. Asheville, N. C. (.5) Johnson City, Tenn. (.05) Elizabethton, Tenn. (.1) Mansfield, Ohio (.05) Zoido, O. (.4) 2,482 San Antonio, Tex.
WQFA WQFC WQFK KNHG KNHG KNHH KNFH WNFN WPFO WPFO WPFO WPFO WPFO WPFO WPFY WPFS WPGZ WPHY WQFY WQFY	Jackson, Mich, (J05) New Haven, Conn. (L) Gainsville, Fla. (J05) Clearwater, Fla. (J05) Clearwater, Fla. (J05) 2.474 Las Vegas, Nev. (J05) Garden City, Kans. (J05) Dodge City, Kans. (J05) Dodge City, Kans. (J05) Dodge City, Kans. (J05) Philadelphia, Pa. Knosville, Tenn. Swarthmore, Pa. Asbeville, N. C. (J5) Johnson City, Tenn. (J5) Elizabethton, Tenn. (J1) Mansfield, Obio (J05) Toledo, O. (J4) 2.482 San Antonio, Tex. New Caste, Pa.
WQFA WQFC WQFK  KNHG KNHH KNGH WNGH WPFO WPFO WPFO WPFO WPFO WPFO WPFO WPFO	Jackson, Mich, (J05) New Haven, Conn. (L) Gainsville, Fla. (J05) Clearwater, Fla. (J05) Clearwater, Fla. (J05) 2.474 Las Vegas, Nev. (J05) Garden City, Kans. (J05) Dodge City, Kans. (J05) Dodge City, Kans. (J05) Dodge City, Kans. (J05) Philadelphia, Pa. Knosville, Tenn. Swarthmore, Pa. Asbeville, N. C. (J5) Johnson City, Tenn. (J5) Elizabethton, Tenn. (J1) Mansfield, Obio (J05) Toledo, O. (J4) 2.482 San Antonio, Tex. New Caste, Pa.
WQFA WQFC WQFK KNHG KNHG KNHG KNGH WAKI WPGP WPFQ WPFQ WPFQ WPFQ WPFQ WPFY WPFY WPGZ WPHY KQZE	Jackson, Mich, (.05) New Haven, Conn. (.1) Gainsville, Fla, (.05) Ciearwater, Fla. (.05) Waterbury, Conn. (.05) 2,474 Las Vegas, Nev. (.05) Garden City, Kans. (.05) Garden City, Kans. (.05) Sandusky, Ohio (.05) Philadelphia, Pa, Knosville, Tenn. Swarthmore, Pa. Asheville, N. C. (.5) Johnson City, Tenn. (.05) Elizabethton, Tenn. (.1) Mansfield, Ohio (.05) Zoido, O. (.4) 2,482 San Antonio, Tex.

A	
WQFF	Monessen, Pa.
WQFU	(.05) Sharon, Pa. (.05) 2.490
KACQ	Kalaloch, Wash. (.01)
KADI	
KADQ KGHD	Oceanside, Calif. (.0375) Brea, Calif. (.05) Seattle, Wash. (.05)
KGHE	Snoqualmie Pass, Wash.
KGHQ	Chinook Pass, Wash.
КСНХ	Santa Ana, Calif.
KGZD	San Diego, Calif. (.05)
KGZU KNFC	Lincoln, Nebr. Port Angeles, Wash.
KNFG	Olympia, Wash. (.05)
KNFK	Bellingham, Wash. (.05)
KNFM	Compton, Calif. (.025)
KNFX	Ellenburg, Wash.
KNGA	Satus Pass Camp, Wash
KNGB	Yakima, Wash. (.05) Vancouver,
KNGC	Vancouver, Wash. (.05)
KNGD	Wash. (.05) Walla Walla, Wash. (.01)
KNGJ	El Centro, Calif. (.05) Norfolk, Nebr.
KNGN	Norfolk, Nebr. (.025)
KNGQ	(.025) Wenatchee, Wash. (.05)
KNGR	(.05)
KNGZ	Ephrata, Wash. (.01)
WAKA	Huntington, Ind. (.05)
WAKK WAMI	Frankfort, Ind. (.05) Bluffton, Ind.
WAMJ	(.05) Natchez, Miss.
WAMK	(.1) Jackson, (Miss.
WPDT	(.05) Kohama Ind
WPDZ	Fort Wayne, Ind.
WPFP	Clarksburg, W. Va.
WPGN	South Bend, Ind. (.1)
WPG0	Huntington
WPGS WPHI	N. Y. (.025) Mineola, N. Y. Charleston, W.
WPHJ	Va. (.05) Fairmont, W. Va.
WPHQ	(.1) Parkersburg, W. Va. (.05)
	Bluefield, W. Va. (.05)
	Greenville, Miss. (.05)
	Marion, Ind. (.05) Portable in Wash.
	(.05)

## **Time Conversion Table**

The time given in our indices is Eastern Standard by the 24-hour clock. Our chart this month shows Eastern Standard Time converted to the EST 24-hour clock, and GMT.

	EST 24-hr.	
EST	clock	GMT
Midn't	0000	0500
1 a.m.	0100	0600
2 a.m.	0200	0700
3 a.m.	0300	0800
4 a.m.	0400	0900
5 a.m.	0500	1000
6 a.m.	0600	1100
7 a.m.	0700	1200
1 a.m. 2 a.m. 3 a.m. 4 a.m. 5 a.m. 6 a.m. 7 a.m. 8 a.m.	0800	<b>13</b> 00
9 a.m.	0900	1400
10 a.m.	1000	1500
11 a.m.	1100	1600
	1200	1700
1 p.m.	1300	1800
2 p.m.	1400	1900
3 p.m.	1500	2000
4 p.m.	1600	<b>21</b> 00
5 p.m.	1700	2200
6 p.m.	1800	<b>23</b> 00
7 p.m.	1900	2400
8 p.m.	2000	0100
1 p.m. 2 p.m. 3 p.m. 4 p.m. 5 p.m. 6 p.m. 7 p.m. 8 p.m. 9 p.m.	2100	0200
10 p.m.	2200	0300
11 p.m.	2300	0400

For times throughout the entire world consult the RADEX Time Converter

## W1XAL, Educational Broadcaster

The world at large knows that the Rockefeller interests are responsible for the largest monument to radio, namely, Radio City, but few people are aware of another radio venture of the Rockefellers.

Arthur Godfrey, announcer and commentator on the Professor Quiz Show, revealed that the shortwave station W1XAL of Boston is financed and owned by the Rockefellers. This station presents nothing but educational features and classical music on its programs. It was the first station in this country to starf a definite movement to give the American public full day courses by the country's foremost college professors. No commercial programs or announcements are carried.

One of the many features of this station is the broadcast of the various lectures on the curriculum of Harvard University, direct from the lecture hall into the homes of listeners.

Sept. 26, 1937 has been set as the date when station WHK Cleveland will join the NBC as a member of the Basic Blue Network, replacing WGAR. WHK is owned by the Radio Air Service Corp., an affiliate of the Cleveland Plain Dealer and the Cleveland News. It operates full time on a regional channel of 1390 kcs with a daytime power of 2500 watts and 1000 watts at night.

The WRAX Broadcasting Co., operators of WRAX, and the Wm. Penn Broadcasting Co., operators of WPEN, both at Philadelphia, have been given special authority to increase their power to one kilowatt to counteract interference caused by CMX Havana, WWJ Detroit and KPRC Houston.

The Merrimac Broadcasting Co., Inc. of Lowell, Mass. has been granted special experimental authority to erect a satellite station at Lawrence, Mass. to operate on 1370 kcs. with from 10 to 100 watts power, unlimited time synchronously with WLLH at Lowell, Mass.

"Last June I completed one submits Wm. vear of DXing," Buchanan, 189 Park St., Sydney, N. S. "I didn't know before that there could be so much fun in life. The first verification I received was from RNE, and since then I have verified all continents except Africa. Thirty-one countries are verified all together. I wonder if any other DXers received a verification from EAH in Spain. Latest cards received here are HJ4ABU, JZJ and PRF5."

## NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

## **KEY TO SYMBOLS**

a

b

Ċ

d

h

KSAC WCHS

WDBO

WIBW

ak

ak

ak

ak

Frequency is given in kilocycles; wave lengths in meters. Night power is shown in watts in third column. Daytime power is shown in parenthesis in fourth column in kilowatts, thus (.23) indicating 250 watts. Some stations outside the United States use a "split frequency." Their exact frequency is shown in fourth column.

- Second Column Symbols Weather or time only. National "Red" network. n R No information available. Verifies reception for return z S Sunday only postage. Fourth Golumn Symbols National "Blue" networ Sy X Synchronized. Verifies only occasionally. в network. Has permit to increase Does not verify. Columbia network. power. D Verification 10c; letter 25c. Day time only. Y Has permit to change lo-Sends own station stamp Dn Day time with occasional cation. for 10c. evening hours. Canadian Brdcstg. Corp. Z Has permit to change fre-Sends own station stamp F quency for 5c. Mutual Brdestg. Sys. National "Red" and "Blue" networks. м a-b-c. Small letters show stations N Sends own station stamp using same transmitter. 1-2-3. Figures denote stations for postage. Has no stamps. Ρ construction sharing time. Has permit Verifies for 5c. only. m .... No information. 540 kcvs. (555.2) CJRM ak 1000 F Regina, Sask. -J. Richardson & Sons, Ltd. 550 kcys. (545.1) CFNB mk 500 F (1) Fredericton, N. B. –James S. Neill & Sons. –Evangelical Luth. Synod. KFUO KFYR 2 (1) N (5) 500 St. Louis, Mo. Bismarck, N. Dak. Corvallis, Ore. ak ak 1000 Meyer Brdcstg. Co. KOAC KSD KTSA WDEV 1000 ak State Agricultural Col. 2R (5) St. Louis, Mo. San Antonio, Tex. Waterbury, Vt. Buffalo, N. Y. 1000 -St. L. Post-Dispatch. ak —KTSA Brdcstg, Co. —Chas. B. Adams, Adm, —Buffalo Brdcstg, Corp. ak 1000 C (5) D ak 500 Č (5) C (5) WGR ak 1000 WKRC ak 1000 Cincinnati, Ohio -Columbia Brdcstg. Sys. -Shenandoah Valley Brdcstg. Corp. WSVA 500 Ď Harrisonburg, Va. ak XEFC 100 Merida, Yuc. Julio Molina Font. ak 560 kcys. (535.4) KFDM ak 500 (1) B C (5) CXY Beaumont, Texas Sabine Brdcstg, Co., Inc. KLZ 1000 -KLZ Brdcstg. Co. -Associated Brdcsters, Inc. ak Denver, Colo. KSFO KWTO 1000 ak San Francisco, Cal. ak 5000 D Springfield, Mo. -Ozarks Brdcstg. Co. -WFIL Brdcstg, Co. БM WFIL ak 1000 Philadelphia, Pa. WIND 1000 (5) N (5) Gary, Ind. Johnson-Kennedy Radio Corp. Station WIS, Inc. ak WIS ak 1000 Columbia, S. C. Miami Brdcstg, Co. WOAM ak 1000 C Miami, Fla. 570 kcys. (526.0) CMCX -Calle Maceo 7, Guanabacoa -Ft. Worth Star-Telegram. -KMTR Radio Corp. 150 z Havana, Cuba CY (1) Wichita Falls, KGKO KMTR ak 250 Tex. Los Angeles, Calif. ak 1000 -KMTR Radio Corp. -Puget Sound Brdcstg. Co. -WKBN Brdcstg. Corp. -Knickerbocker Brdcstg. Co. -WNAX Brdcstg. Co. -WhAX Brdcstg. Co. -Ohio State University -Central N. Y. Brdcstg. Corp. -Citizen-Times Co., Inc. Ċ (5) KVI ak 1000 Tacoma, Wash. Youngstown, Ohio New York, N. Y. Yankton, S. Dak. WKBN ak 500 CI WMCA 1000 C (5) Yankton, 1 (1) Columbus, Ohio B (WSYU) Syracuse, N. Y. N Asheville, N. C. ak WNAX 1000 ak WOSU 750 ak WSYR ak 1000 WWNC ak 1000 580 kcys. (516.9) 50 Prince Rupert, B. C. -Felix E. Batt. -CHRC, Ltd. CFPR ak F . . . . Quebec, P. Q. CHRC ak 100 100 Toronto, Ont. CKCL ak -Dominion Battery Co., Ltd. Ň CKUA KMJ University of Alta. ak 500 Edmonton, Alta. ak
  - Fresno, Calif. Manhattan, Kans. Charleston, W. Va. 1000 2(1) 500 500 C(I) C 1000 Orlando, Fla.
  - 2C (5) Topeka, Kans. 1000

- -Topeka Brdcstg, Ass'n., Inc.

As shown in the Index by Frequencies and Dial Numbers WILL ak 1000 ak 1000 Urbana, III. University of Ill. n Worcester, Mass. -Telegram Pub. Co., Inc. WTAG R 590 kcys. (508.2) R (5) C (5) BDX -Louis Wasmer, Inc. KHO WEEI ak 1000 Spokane, Wash. Columbia Brdcstg. Sys. ak 1000 Boston, Mass Kalamazoo, Mich. WKZO. Inc. WKZO 1000 ak Omaha, Nebr. wow 1000 R (5) -Woodmen of the World ak 600 kcys. (499.7) —Can. Marconi Co., Ltd. —G. C. Chandler CFCF 400 FN ak Montreal, P. Q Vancouver, B. C. CJOR ak 500 . . . . -G. C. Cobandie -Troncoso y Gil -Can. Brdcstg. Corp. -Airfan Radio Corp., Ltd. -Monumental Radio Co. -Yankee Network, Inc. CMW ak 1400 Havana, Cuba CRCW 500 F (1) Windsor, Ont. ak  $\hat{\mathbf{B}}$ San Diego, Calif. Baltimore, Md. KFSD ak 1000 WCAO ak 500 BM (1) Bridgeport, Conn. BM (5) Cedar Rapids, Iowa C (5) Memphis, Tenn. WICC ak 500 Iowa Brdcstg. Co. WMT ak 1000 WREC 1000 WREC, Inc. ck 610 kcys. (491.5) Don Lee Brdcstg. Sys.
Kansas City Star Co.
Penn. Brdcstg. Co.
Cleve. Radio Brdcstg. Corp. San Francisco, Cal. Kansas City, Mo. Philadelphia, Pa. KFRC M (5) с 1000 WDAF ak 1000 R (5) 1000 WIP ak Ď WJAY ak 500 Cleveland, Ohio 620 kcys. (483.6) R (5) N KGW KTAR -Oregonian Pub. Co. ak 1000 Portland, Ore. 1000 Phoenix, Ariz. ak WFLA ak 1000 Na (5) Clearwater, Fla. WHJB 250 CD ak Greensburg, Pa. CM (1) Bangor, Maine Na (5) St. Petersburg, Fla. N (5) Milwaukee, Wis. -Maine Brdcstg. Co., Inc. -Chamber of Commerce WLBZ WSUN 500 ak ak 1000 The Journal Co. WTMJ 1000 ak 630 kcys. (475.9) CFCO CFCY F -John Beardall ak 100 Chatham, Ont. Charlottetown, P.E.I.—Island Radio Brdcstg. Co. Winnipeg, Man. —Jas. Richardson & Sons. Kelowna, B. C. —Okanagan Brdcsters, Lto ak 1000 Ē CJRC 500 **F**(1) ak CKOV Okanagan Brdcsters, Ltd. Ē ak 100 KFRU, Inc. KFRU 1 (1) Columbia, Mo. ak 500 Mrs. Ida A. McNeil KGFX ak 200 D Pierre, S. Dak Evans. on the Air, Inc. B1 (1) WGBF ak 500 Evansville, Ind. WMAL 250 B (.5) C (1) Washington, D. C. Providence, R. I. NBC, Inc ak -Cherry & Webb Brdcstg. Co. -Jorge L. Falomeque. WPRO ak 500 XEZ 580 Merida, Yuc. z 640 kcys. (468.5) СМСВ 150 Havana, Cuba Los Angeles, Calif. Portland, Maine -El Progreso Cubana ak KFI WGAN WHKC -Earle C. Anthony, Inc. ak 50000 R ĎΡ -Port. Brdcstg. Sys., Inc. 7 500 Associated Brdcstg, Corp. Columbus, Ohio ak 500 Ď... -State Col. of Agriculture -Benito Garza Ortegon 5000 Ames, Iowa WOI ak XEBX 250 Sabinas, Coah. Z 650 kcys. (461.3) ak 50000 MN Nashville. Tenn. -Nat'l, Life & Accident WSM 660 kcys. (454.3) 500 D Omaha, Nebr. Omaha Grain Exchange WAAW ak ak 50000 New York, N. Y. Mexico City, D. F. Mexicali, B. Cfa. —NBC, Inc. —Cia. Pan-Americana de Radio WEAF R XEAL XEAO 1000 -Luis L. Castro ak 250 670 kcys. (447.5) WMAO ak 50000 R -NBC, Inc. Chicago, Ill.

NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

680 kcys. (440.9) CMCG ak 1000 Havana, Cuba -La Onda, S. A. KFEQ KFEQ VAS -La Onoa, C. -KFEQ, Inc. -NBC, Inc. -Can. Marconi Co., Inc. ak 2500 Ď St. Joseph, Mo. ak 50000 San Francisco, Cal. Glace Bay. N. S. St. John's, Nfld. Raleigh, N. C. Lawrence, Mass. R 685 akn 2000 VOWR 500 681 ck -Wesley United Church -WPTF Radio Co. N (5) DP WPTF ak 1000 1000 2 Hildreth & Rogers Co. 690 kcys. (434.5) CFRB ak 10000 C Toronto. Ont. -Rogers Radio Brdcstg. Co. CJCJ ak 100 Ē Calgary, Alta. Albertan Publishers, Ltd. XET ak 5000 Monterrey, N. L. El Pregonero del Norte 700 kcvs. (428.3) WLW ak 500000 MN (W8XO) Cincinnati, O. -Crosley Radio Corp. 710 kcys. (422.3) KIRO ak 1000 Seattle, Wash. Beverly Hills, Calif. Newark, N. J. -Queen City Brdcstg. Co. -B. Hills Brdcstg. Corp. KMPC 500 ak WOR ak 50000 M Bamberger Brdcstg. Serv. Inc. 720 kcys. (416.4) WGN XEH ak 50000 -WGN, Inc. Chicago, Ill. ak 250 Monterrey, N. L. -Constantino de Ternava 730 kcys. (410.7) CFPL ak 100 F London, Ont. -London Free Press ĊĴĊĂ CKAC Edmonton, Alta. Montreal, P. Q. Fort William, Ont. ak 1000 Ē -Taylor & Pearson Brdcstg. Co. -La Presse Pub. Co. 5000 Ĉ ak CKPR CMK ak 100 Ē -Dougall Motor Car Co. Havana, Cuba — Cia. Nacional de Radie Agua Caliente, B. Cfa.—Cia. Mexicana del A. C. Piedras Negras, Coah.—P. N. Brdcstg. Co. 3000 ak . . . XEBC XEPN ak 5000 ak 100000 740 kcys. (405.2) KMMJ ak 1000 D Clay Center, Nebr. KMMJ, Inc. KTRB ak 250 250 McTammany & Bates. Granite State Brdcstg. Corp. D Modesto, Calif. WHEB D ak Portsmouth, N. H. WSB ak 50000 N Atlanta, Ga. Atlanta Journal Co. 750 kcys. (399.8) CMCW dk 150 Havana, Cuba -"Radio Pilot." KGŪ 2500 ai N Honolulu, Hawaii Detroit, Mich. -Advertiser Pub. Co., Ltd. WJR ak 50000 Ĉ The Goodwill Station XEAM 2 25 Matamoros, Tams. -Manuel Salines. 760 kcys. (394.5) -F. Chavarry. -Am. Radio Tel. Co. -WBAL Brdcstg. Co. CMHX ak 200 Cienfuegos, Cuba Seattle, Wash. KXA WBAL ak 250 .5) BMSy Baltimore, Md. St. Louis, Mo. New York, N. Y. Tijuana, B. Cfa. ak 2500 WEW ak 1000 D -St. Louis University BSy WJZ ak 50000 -NBC, Inc. XEOK ak 2500 --Carlos de la Serra 770 kcys. (389.4)CMBS 150 ak Havana, Cuba Lincoln, Nebr. KFAB ak 10000 CSy WBBM ak 50000 CSy Chicago, Ill. 780 kcys. (384.4) CHWK dk 100 Chilliwack, B. C. -Chil. Brdcstg. Co., Ltd. CKSO ak 1000 Ē Sudbury, Ont. -Sudbury Star

65

## NORTH AMERICAN B. C. STATIONS BY FREQUENCIES

-Cia. Nacional de Radio Camaguey, Cuba CMJK 250 ak Hearst Radio, Inc. -S. Dak. State College Los Angeles, Calif. Brookings, S. Dak. ak 1000 (5) KEHE Ď ak 1000 KFD Y Anchorage Radio Club. Inc. Anchorage, Alaska Billings, Mont. 250 KFQD ck N (5) BM N. W. Auto Supply Co. KGHL ak 1000 BM Providence, R. I. N (5) Memphis, Tenn. NX (1) Norfolk, Va. ..... Mexico City, D. F. Yankee Network, Inc. M. Commercial Appeal Co. WEAN ak 1000 WMC ak 1000 WTAR Radio Corp. WTAR 500 ak Plaza de San Juan 15. 1000 XEI. 7 790 kcys. (379.5) ---"Rialto." --NBC, Inc. --Pittsburg Brdcstg. Co. --General Electric Co. Matanzas, Cuba 500 CMGH ak <u>в</u>.... ak 7500 San Francisco, Cal. KGO KOAM 1000 ĎΡ Pittsburg, Kans. z Schenectady, N. Y. ak 50000 R WGY 800 kcys. (374.8) -Ft. Worth Star-Telegram Fort Worth, Texas WBAP ak 50000 Na -A. H. Belo Corp. Dallas, Texas ak 50000 Na WFAA -Associated Brdcstg. Corp. Cumberland, Md. WTBO ak 250 D 810 kcys. (370.2) -Oscar Gutierrez CMCF 600 Havana, Cuba ak ċ Minneapolis, Minn. New York, N. Y. -Columbia Brdcstg. Sys. ak 50000 WCCO WNYC -City of N. Y 1000 Đ ak Gobierno del E. de Ags. Aquascalientes, Ags. XEXC z 350 820 kcys. (365.6) Cienfuegos, Cuba Louisville, Ky. Tijuana, B. Cfa. -Ramon Gonzales CMHW ak 100 -Louisville Times Co. -Angel B. Fernandez WHAS ak 50000 С XEBG 1000 7 830 kcys. (361.2) -Teatro Principal Camaguey, Cuba Denver, Colo. 500 CMJX ak N D ak 50000 KOA WEEU Reading, Pa. Boston, Mass. Gainsville, Fla. ak 1000 Matheson Radio Co., Inc. WHDH ak 1000 Dn University of Fla. WRUF ak 5000 Dn 840 kcys. (356.9) -A. A. Murphy & Sons. -Can. Brdcstg. Corp. -Newfoundland llotel CFQC ak ak 1000 F Saskatoon, Sask. Toronto, Ont. St. John's, Nfld. ĒΝ ČŘČŤ VOGY 5000 400 ak . . . . ck 350000 Brinkley Hospital Villa Acuna, Coah. XERA 850 kcys. (352.7) Havana, Cuba Marianao CMCN z -Cannon System, Ltd. -Cornell University KIEV WESG Ď Glendale, Calif. Elmira, N. Y. ak 250 ak 1000 CD -Mich. State College -Loyola University. WKAR 1000 Ď E. Lansing, Mich. ak wwi. ak 10000 New Orleans, La. C 860 kcys. (348.6) -Columbia Brdestg. Sys. ak 50000 C (WBOQ) New York, N. Y. DM Kansas City, Mo. WABC Kansas City, Mo. Tijuana, B. Cfa. -WHB Brdcstg. Co. -Box 202, San Diego, Calif. WHB ak 1000 хемо ak 5000 Mexico City, D. F. -Ignacio Barrueta XENC 50 z 870 kcys. (344.6) -NBC, Inc. Chicago, Ill. Chicago, Ill. ak 50000 Ba WENR Agricultural Brdcstg. Co. wis ak 50000 Na Monterrey, N. L. Jesus Quintanilla. XEFB ak 200

#### NORTH AMERICAN B. C. STATIONS BY FREQUENCIES 880 kcys. (340.7) CFJC ak 100 F Kamloops, B. C. -Review Pub. Co СМО ak 500 Havana, Cuba -La Casa de las Medias CRCO 1000 F Ottawa, Ont. 2M (1) Greeley, Colo. Oakland, Calif. ak -Can. Brdcstg. Corp. -Mid-Western Radio Corp. KFKA KLX ak 500 1000 -Tribune Bldg. Co. -Pillar of Fire -Miss. Brdcstg. Co., Inc. -Scranton Brdcsters, Inc. ak KPOF ak 500 Denver, Colo. CX (1) Meridian, Miss C1 (1) Scranton, Pa. 1 Scranton, Pa. WCOC ak 500 WGBI ak 500 WOAN ak 1000 Scranton Times WPHR ak 500 ñ Petersburg, Va. Iowa City, Iowa WLBG, Inc. WSUI 500 ak (1)-State Univ. of Iowa. 890 kcys. (336.9) Little Rock, Ark. KARK ak 500 B(1) --Ark. Radio & Equip. Co. --KFNF, Inc. KFNF ak 500 2 (1) Shenandoah, Iowa KFPY 1000 Spokane, Wash. C (5) ak Symons Brdcstg. Co. KUSD WBAA ak 500 2 Vermillion, S. Dak. Univ. of S. Dak, ak 500 (1)W. Lafayette, Ind. -Purdue University -Ga. School of Technology WGST WJAR ak 1000 Č (5) Atlanta, Ga. Providence, R. I. Fairmont, W. Va. Mexico City, D. F. ak 1000 Ř Outlet Co. WMMN ak 500 **C**(1) Monongahela Valley Brdcstg, Co. XEW ak 50000 -Cadena Radiodifusora Mex. 900 kcys. (333.1) KGBU KHJ KSEI ak 500 X M (5) Ketchikan, Alaska -Aaa. Radio & Serv. Co. -Don Lee Brdcstg. Sys. 1000 Los Angeles, Calif. Pocatello, Idaho Buffalo, N. Y. ak 250 ak (1)Radio Serv. Corp. WBEN, Inc. WBEN WELI ak 1000 Ř (5) 500 500 -City Brdcstg. Corp. -Monocacy Brdcstg. Co. -City of Jacksonville. -WKY Radiophone Co. ak D New Haven, Conn. Frederick, Md. WFMD ak D Jacksonville, Fla N (5) N (5) DX WJAX WKY ak 1000 Oklahoma City, Ok. Stevens Point, Wis. ak 1000 WLBL 2500 яk State of Wis WTAD 1000 ak n **Ouincy**, Ill. Ill. Brdcstg. Corp. 910 kcys. (329.6) CJAT ak 1000 F Trail, B. C. Kootenay Brdcstg. Co. Man. Telephone Sys. Can. Brdcstg. Corp. Box 410. Laredo, Texas Winnipeg, Man. Montreal, P. Q. Nuevo Laredo, Tams. CKY ak 15000 F CRCM ak 5000 F XENT ak 150000 920 kcys. (325.9) 1000 CMX ak Havana, Cuba -Casa Lavin Eugene P. O'Fallon, Inc. Fishers Blend Station, Inc. Ma KFEL KOMO ak 500 Denver, Colo. Seattle, Wash. R (5) N (5) 1000 ak KPRC Houston Ptg. Corp. Colo. Radio Corp. Drovers Journal Pub. Co. ak 1000 Houston, Texas KVOD ak 500 Ba Denver, Colo. Chicago, Ill. Boston, Mass. Philadelphia, Pa. WAAF 1000 ak D -Brdcstg. Serv. Org., Inc. -Wm. Penn Brdcstg. Co. -WRAX Brdcstg. Co. WORL ak 500 D WPEN 1000 ak 1 WRAX 1000 ak Philadelphia, Pa. 1 WSPA ak 1000 Ď -Voice of S. C. Evening News Ass'n. Box 714, Calexico, Calif. Spartanburg, S. C. WWJ ak 5000 R Detroit, Mich XEAA ak 200 Mexacali, B. Cfa. 930 kcys. (322.4) Calgary, Alta. North Bay, Ont. Prescott, Ont. Halifax, N. S. Brantford, Ont. CFAC CFCH ak 100 Taylor, Pearson & Carson ak 100 F Northern Brdcstg. Co., Ltd. Radio Ass'n. of Prescott CFLC ak 100 Maritime Brdcstg. Co., Ltd. -Telephone City Brdcstg. Ltd. -May Seed and Nursery Co. CHNS 1000 F яk CKPC ak 100 F KMA (5) ak 1000 Shenandoah, lowa c KROW ak 1000 Oakland, Calif. Educational Brdcst, Corp. WBRC Birm. Brdcstg. Co., Inc. Times World Corp. ak 1000 Birmingham, Ala. C (5) WDR.I ak 1000 Roanoke, Va. Hermosillo, Son,

-Carlos Halderamma

XEBH

ak 500

NORTH AMERICAN B. C. STATIONS BY FREQUENCIES 940 kcys. (319.0) -KOIN, Inc. -Ayre & Sons, Ltd. -Bremer Brdcstg. Corp. KOIN ak 1000 C (5) Portland, Ore. VOAS WAAT 100 St. John's, Nfld. ak D Jersey City, N. J. N Louisville, Ky. R (2.5) Portland, Maine N (5) Fargo, N. Dak. D Madison, Wis. ak 500 WAVE, Inc. 1000 -Congress Sq. Hotel Co. -WDAY, Inc. -University of Wis. -Ash. Star-Beacon WAVE яk 1000 WCSH ak 1000 WDAY ak 5000 WHA ak Ashtabula, Ohio ĐΡ WICA z 250 Radio Nacional Partido Nac. Revolucionaria Mexico City, D. F. Mexico City, D. F. XEFO ak 5000 XEYO 500 Z 950 keys. (315.6) -Lethbridge Brdcstg. Co. -''La Voz del Aire.'' S. A. -Can, Brdcstg. Corp. -Warner Bros. Brdcstg. Corp. Lethbridge, Alta. Havana, Cuba 100 F ak CJOC 250 CMCD ak Chicoutimi, P. Q. Hollywood, Calif. 100 Ē CRCS ak r (5) C (5) DP -warner Bros. Brdcstg -Midland Brdcstg. Co. -Gross & Shields -NBC, Inc. 1000 KFWB ak Kansas City, Mo. Saginaw, Mich. KMBC ak 1000 WHAL 500 z RX (1) Washington, D. C. ak 500 WRC 960 kcys. (312.3) --Sunwapta Brdcstg. Co. --Gaspesian Radio Co. Edmonton, Alta. 100 ak CFRN New Carlisle, P. Q. Reynosa, Tams. 1000 Ē CHNC ak --Cia. Int. Difusora Reynosa XEAW 50000 С 970 kcys. (309.1) -Calle Infanta 132 Havana, Cuba Seattle, Wash. CMBY 150 7 -Fishers Blend Sta., Inc. B 5000 KJR WCFL ak -Chi. Fed. of Labor. -Seaboard Radio Bc. Corp. Chicago, Ill. 5000 В ak Glenside, Pa. ak 100 D WIRG 980 kcys. (306.0) -Westinghouse Elec. Pittsburgh, Pa. Tijuana, B. Cfa. KDKA ak 50000 B Tijuana, B. Cfa. —Aurelio Mateus Nuevo Laredo, Tams. —''Voice of the Border.'' XEAC 250 ak XEFE 7. 25 990 kcys. (302.8) -Westinghouse Elec. Co. -Westinghouse Elec. Co. Boston, Mass ak 50000 BSy WBZ Springfield, Mass. Nogales, Son. Mexico City, D. F. Tampico, Tams. BSy WBZA 1000 ak Francisco G. Elias 750 ak XEAF Arturo Martinez XEK ak 100 -Fernando Sada 250 XES ak (299.8)1000 kcys. -Manuel y G. Salas -Standard Brdcstg. Co. -St. John's Eve. Telegram Havana, Cuba 500 CMBZ ak (1)Los Angeles, Calif. St. John's, Nfld. ak 1000 D'n KFVD VOCM 200 1006 z Central Brdcstg. Co. ak 50000 Des Moines, Iowa WHO R -Alejandro Diaz -"Indo Latin Voice." Aguascalientes, Ags. Nuevo Laredo, Tams. Portable in Mexico XEBI ak 25 100 XEBK ak -Dpto. de Salubridad Publica XEXS 100 Z 1010 kcys. (296.9) -Maple Leaf Radio Co., Ltd. F Hamilton, Ont. CHML 100 яk Van. Daily Province CKCD CKCK CKCO 100 Vancouver, B. C. ak -Leader-Post, Ltd. -Dr. G. M. Geldert -Acadia University Regina, Sask. Ottawa, Ont. 500 FX ak 100 Ē ak Wolfville, N. S CKIC CKWX 50 ak -Western Brdcstg. Co. -Rafael Valdez -Powell & Platz Vancouver, B. C. Camaguey, Cuba Coffeyville, Kans. 100 F1 ak CMJA ak 300 2 KGGF KQW 1000 ak -Radio Station KOW -Marcus Loew Booking Agency -University of Okla. San Jose, Calif. New York, N. Y. ak 1000 (5) 2 WHN ak 1000 Norman, Okla. WNAD ak 1000

ł

NORTH AMERICAN B. C. STATIONS BY FREQUENCIES WNOX ak 1000 C (5) Knoxville, Tenn. Veracruz, Ver. -Scripps-Howard Radio, Inc. XEU ak 250 -Fernando Pazos S. 1020 kcys. (293.9)K Y W WDZ ak 10000 R Philadelphia, Pa. -Westinghouse Elec. Co. D ak 250 Tuscola, 111. Juarez, Chih. -WDZ Brdcstg. Co. XEJ 1000 ak Juan G. Buttner (291.1)1030 kcys. CFCN CKLW ak 10000 Calgary, Alta. -Voice of the Prairies, Ltd. Windsor, Ont. Havana, Cuba Mexico City, D. F. 5000 M ak -West. Ont. Brdcstg, Co. CMCY 5000 ak --- Manuel D. Outran . . . . XEB ak 10000 -El Buen Tono, S. A. (288.3)1040 kcys. KRLD ak 10000 С Dallas, Texas -KRLD Radio Corp. KWJJ KYOS ak 500 Portland, Ore. -KWJJ Brdcstg, Co., Inc. -Merced Star Pub. Co. Ď 250 Merced, Calif. 7. WTĬČ ah 50000 ñ Hartford, Conn. Travelers Brcstg. Service (285.5)1050kcys. CMKD 250 F ak Santiago, Cuba Quebec, P. Q. Abilene, Kans. -Radioemisora Oriental CRCK ak 1000 -Can, Brdcstg, Corp. KFBI KNX ak 5000 Dn Farmers & Bankers Bc. Corn. ak 50000 Los Angeles, Calif. Eau Claire, Wis. C -CBS of Calif., Inc. WEAU 1000 Ď -Central Brdcstg. Co. -Glenn Van Auken z WGVĂ ĎР 1000 Z Indianapolis, Ind. 1060 kcys. (282.8)Hot Springs, Ark. St. John's, Nfid. Baltimore, Md. Norfolk, Nebr. College Park, Md. KTHS ak 10000 N -Chamber of Commerce VOAC 40 1065 z WBAL ak 10000 BM -WBAL Brdcstg. Co. -Norfolk Daily News. WJAG W3XJ ak 1000 D 100 Р 7. McNary & Chambers XEAD XEMG ak 125 Alberto Palos Sauza Guadalajara, Jal. 100 z Atzcapotzalco, D. F. Humberto Garcia Ruiz 1070 kcys. (280.2)CMBX Havana, Cuba —Alberto Alvarez Sagua la Grande, Cuba—Abelardo Menocal ak 500 . . . . CMHA z 50 . . . . **KJBS** āk 500 San Francisco, Calif. -Julius Brunton & Sons WCAZ ak 100 D Carthage, Ill. Cleveland, Ohio -Superior Brc. Serv., Inc. WTAM ak 50000 Ŕ -NBC, Inc. kcys. 1080(277.6)WBT ak 50000 С Charlotte, N. C. -Columbia Brdcstg. Sys. WCBD Chicago, Ill. Chicago, Ill. -WCBD, Inc. -Moody Bible Institute -Javier Velasco ak 5000 Dnl WMBI ak 5000 Dnl XEBA XEDP 20 Guzman, Jal z . . . . Mexico City, D. F. āk 500 -Dpto, de Publicidad 1090 kcys. (275.1)KMOX ak 50000 С St. Louis, Mo -Columbia Brdcstg, Sys. XEAQ Rosarito, B. Cfa. ak 1000 -Radio Mexsa 1100 kcys. (272.6)CMCJ ak 500 Havana, Cuba, —Radio Emisora Comercial Vancouver, B. C. Stockton, Calif. -Can. Brdcstg, Corp. -E. F. Peffer CRCV ak 5000 F KGDM KWKH ak 1000 ĎМ Shreveport, La. New York, N. Y. Atlantic City, N. J. 10000 С -Internat'l. Brc. Corp. c WBIL āk 5000 5000 ĭ -Arde Bulova WPG ak Ĉι -City of Atlantic City 1110kcys. (270.1)KSOO ak 2500 BDn Sioux Falls, S. Dak. -S. F. Brdcstg. Ass'n.

## 69

NORTH AMERICAN B. C. STATIONS BY FREQUENCIES Richmond, Va. —Larus & Bros. Co. Pied. Negras, Coah. —Pied. Neg. Brdcstg. Co. WRVA XELO ak 5000 CM ak 50000 1120 kcys. (267.7) -La Patrie Pub. Co. -N. B. Brdcstg. Co. -Westworth Radio Brdcstg. Co. Montreal, P. Q. CHLP ak 100 F F (1) F (1) CHSJ 500 St. John, N. B. ak CKOC CKX CMGF 500 Hamilton, Ont. ak -Man. Telephone System -Gnrl, Betancourt No. 51 Ē Brandon, Man. ak 100 Matanzas, Cuba 150 dk -Merchan P. Figeredo -Spokane Brdcstg. Corp. -Echo Park Evan. Ass'n. 200 Ď.... Manzanillo, Cuba CMKM ak D Spokane, Wash. a (2.5) Los Angeles, Calif. a (2.5) Los Angeles, Calif. KFIO ak 100 KFSG ak 500 Radio Brdcsters., Inc. KRKD KRSC ak 500 Seattle, Wash. Boston, Mass. Radio Sales Corp. Mass. Brdcstg. Corp. 250 ak WCOP ak 500 D -WDEL, Inc. -Hearst Radio, Inc. -Agri. & Mechanical Col. Wilmington, Del. Milwaukee, Wis. Ř (.5) C (1) WDEL WISN ak 250 250 ak College Sta., Tex. Austin, Texas WTAW ak 500 -State Capitol Brdcstg. Assn. DP 1000 7 (265.3)1130 kcys. Ciego de Avila, Cuba -Gilberto Gesse Lopez CMJI ak 150 ċ... Salt Lake City, Ut. -Radio Service Corp. ak 50000 KSL -WJJD, Inc. WJJD ak 20000 Dn Chicago, Ill. -Internat'l. Brc. Corp. -Salvador Monterrubio New York, N. Y. wov ak 1000 D Mexico City, D. F. XEJP 100 z 1140 kcys. (263.0) -John L. Stowers Havana, Cuba Tulsa, Okla. CMBG z 200 -Southwestern Sales Corp. ak 25000 N1 **KVOO** -Ala. Polytechnic Inst. Birmingham, Ala. WAPI ak 5000 NI -Conn. Valley Brdcstg. Co. ak 500 DM Springfield, Mass. WSPR (260.7)1150 kcys. -John L. Stowers Camaguey, Cuba Rochester, N. Y. 200 CMJF z --Stromberg-Carlson Co. WHAM ak 50000 В Tijuana, B. Cfa. Minatitlan, Ver. Luis F. Encicso 100 XEC XEDW ak Hector Silva Canto 7 20 (258.5)1160 kcys. -Romualdo Ugalde Cienfuegos, Cuba CMHJ ak 175 Cientuegos, Cuba Santiago, Cuba Fort Wayne, Ind. Wheeling, W. Va. Saltillo, Coah. Merida, Yuc. Mexico City, D. F. CMKG z WOWO ak 10000 Westinghouse Radio Station -W. Va. Brdcstg. Corp. -"La Voz del Comercio." BI WWVA ak 5000 Cl ak XEAS 50 . . . . -Hidalgo Franco -Refugio Esperza Vda. XEBJ XEBZ 20 z . . . . 100 ad -Cia. Radiofonografica 2500 Guadalajara, Jal. ak XED XEP . . . . -Apartado 89 500 Juarez, Chih. ak (256.3)1170 kcys. -Luiz Perez Garcia Havana, Cuba CMBD 500 WCAU ak 50000 C -WCAU Brdcstg. Co. Philadelphia, Pa. 1180 kcys. (254.1) -B. Ildefonso Ciego de Avila, Cuba 50 CMJO ak -Oregonian Pub. Co. **B2** Portland, Ore. Albuquerque, N. M. 5000 **KEX** ak -Albuquerque Brdcstg. Co. -Dr. Geo. W. Young ak 10000 **B2** ков Minneapolis, Minn. New York, N. Y. Dn (5) WDGY 1000 ak -Hearst Radio, Inc. -Southeastern Brdcstg. Co. WINS ak 1000 ï Macon, Ga. Tacuba, D. F. WMAZ 1000 ak -Eduardo Limon Segui YEFA 500 7 (252.0) [ 1190 kcys. Santiago, Cuba Visalia, Calif. CMKX z KTKC z -Tulare-Kings Counties 250 DP 7.

70

			_	_		THE VERC
	VONF	ak	500	1195	St. John's, Nfld.	-Dominion Brdcstg. Co.
	WATR WOAI	ak	100 50000	DXZ N	Waterbury, Conn.	-WATR Co Inc
	WSAZ	ak	1000	· · A ·	San Antonio, Tex. Huntington, W. Va.	—Southland Industries, Inc. —WSAZ, Inc.
	1200	ka	cys.	(249	9.9)	
7	CHAB CKNX	ak	100	F	Moose Jaw, Sask.	-CHAB, Ltd.
	CKNX	dk	50		Wingham, Ont.	-Wingham Radio Club
	CKTB CMCO	ak ad	100 250	F	St. Catharines, Ont	. —Silver Spire Brdcstg. Station
	KADA	ak	100	DM	Havana, Cuba Ada, Okla.	-Enrique Lasanta
	KBTM	ak	100	D	Jonesboro, Ark.	—C. C. Morris —W. J. Beard
	KDNC KELO	Z Z	100 100	(.25) I P	P Lewistown, Mont. Sioux Falls, S. Dak.	-Democrat-News Co.
	KFJB	ãk	100	(.25)	Marshalltown, Ia.	—S. F. Brdcstg. Ass'n. —Marshall Elec. Co., Inc.
	KFXD KFXJ	ak	100	(.23)	Nampa, Idaho	-Frank E. Hurt
	KGDE	ak c	100 100	(.25) (.25)	Grand Junc., Colo. Fergus Falls, Minn.	-Western Slope Brdcstg. Co,
	KGEK KGFJ KGHI	ak	100		Sterling, Colo.	
	KGFJ	ak	100	( )=)	Los Angeles, Calif.	-Elmer G. Beehler -Ben S. McGlashan
	KGVL	ak z	100 100	(.25) DP	Little Rock, Ark. Greenville, Texas	-Ark. Brdcstg. Co.
	KMLB	ak	100	(.25)	Monroe, La.	—Hunt Brdcstg. Assn. —Liner's Brdcstg. Station
	KOOS KSUN	ak	100	(.25)	Marshfield, Ore.	-Liner's Brdcstg. Station -Pacific Radio Corp.
	KVCV	с z	100 100	(.25)	Lowell, Ariz. Redding, Calif.	-Copper Elec. Co., Inc.
	KVEC	z	250	D	San Luis Obispo, Ca	—Golden Empire Brdcstg. Co. lif.—Valley Elec. Co.
	KVOS KWG	dk ak	100 100	N	Bellingham, Wash.	-KVOS. Inc.
	KWNO	Z	100	ĎР	Stockton, Calif. Winona, Minn.	-McClatchey Brdcstg. Co. -Winona Radio Service.
	WABI	ak	100	(.25)	Bangor, Maine	-Community Brdcstg, Serv.
	WAIM	ak ak	100 100	C	Anderson, S. C. Wayeross, Ca	-Wilton E. Hall
	WAYX WBBZ	ak	100	M (.25	Waycross, Ga. ) Ponca City, Okla.	—Waycross Brdcstg. Co. —Adelaide L. Carrell
	WBHP	z	100	r	Huntsville, Ala.	-Wilton Harvey Pollard
	WBNO WCAT	ak ak	100 100	1 D	New Orleans, La. Rapid City, S. Dak.	-Coliseum Place Bap, Church
	WCAT WCAX	ak	100	(.25) (.25)	Burlington, Vt.	-S. Dak. State School of Mines Bur. Daily News, Inc.
	WCLO WCPO	ak ak	100 100	(.25)	Janesville, Wis.	-Gazette Ptg. Co.
	WDSM	Z	100	(.25) P	Cincinnati, Ohio Superior, Wis.	Scripps-Howard Radio, Inc. Fred A. Baxter
	WEST	ak	100	3 (.25)	Easton, Pa.	-Associated Brdcstrs., Inc.
	WFAM WFTC	ak ak	100 100	8	South Bend, Ind.	-South Bend Tribune
	WHBC	ak	100	(.25) (.25)	Kinston, N. C. Canton, Ohio	-Jonas Weiland Edw. P. Graham WHBY, Inc.
	WHBY	ak	100	(.25) C (.3) (.25)	Green Bay, Wis.	-WHBY, Inc.
	WIBX WIL	ak ak	100 100	(25)	Utica, N. Y. St. Louis, Mo.	-wiba, inc.
	WJBC	ak	100	6 (.25)	Bloomington, Ill.	—Mo. Brdcstg. Corp. —Kaskaskia Brdcstg. Co.
	WJBL WJBW	ak ak	100 100	6	Decatur, Ill.	-Commodore Brdcstg. Co.
	WJNO	ak	100	C (.25)	New Orleans, La. W. Palm Beach Fla	—Chas. C. Carlson —Hazelwood, Inc.
	WJRD	C.	100	DX	W. Palm Beach, Fla. Tuscaloosa, Ala.	-James R. Doss, Jr.
	WKBO WLVA	ak ak	100 100	3(.25)		-Keystone Brdcstg. Corp.
	WMFR	ak	100	D	Lynchburg, Va. High Point, N. C.	-Lynchburg Brdcstg. Corp. -Station WMFR, Inc.
	WMPC	ak	100	(.25) DP	Lapeer, Mich.	—lst Methodist Church
	WOLS WRBL	z ak	100 100	(.25)	Florence, S. C. Columbus, Ga.	-O. Lee Stone -WRBL Radio Station, Inc.
	WTHT	ak	100	M	Hartford, Conn.	-Hartford Times, Inc.
	WWAE	ak	100	8	Hammond, Ind.	-Hammond-Calumet Brdcstg. C
	•••••	Z Z	250 100	DP DP	Salisbury, Md. Toledo, Ohio	-Frank M. Stearns Community Brdcstg. Co.
	1210	kc	ys.	(247	.8)	
		ak	50			-M. I. Hiddens
	CJCU	z	50		Stratford, Ont. Aklavik, N.W.T.	-Dr. J. A. Urguarhart
		ak ak	100 100	F F	Prince Albert, Sask. Hull, P. Q.	-M. I. Higgens -Dr. J. A. Urquarhart -CKBI, Ltd. -CKCH Hull Brdcstg. Co., Ltd. -R. I. MacAdam
		ak	50		Cobalt, Ont.	-R. L. MacAdam

2

ond-Calumet Brdcstg. Corp.

- M. Stearns
- unity Brdcstg. Co.

		500	(=	
CJCS	ak	50		Stratford, Ont.
CJCU	z	50		Aklavik, N.W.T.
CKBI	ak	100	F	Prince Albert, Sask.
CKCH	ak	100	F	Hull, P. O.
CKMC	ak	50		Cobalt, Ont.
CMHI	ak	150		Santa Clara, Cuba
KALB	ak	100		Alexandria, La.
KANS	ak	100	B	Wichita, Kans.
KASA	c	100	M	Elk City, Okla.
KDLR	ak	100		Devils Lake, N. D.
KDON	z	100	M	Monterrey, Calif.

-K. L. MacAdam -Lavis y Paz -Alexandria Brdcstg. Co. -KANS Brdcstg. Co. -E. M. Woody -KDLR, Inc. -Mont. Peninsula Brdcstg. Co.

	N	ORI	H AM	ERICAN D. C. S.	TATIONS DI TREQUENCIES
KFJI	ak	100		Klamath Falls, Ore.	-KFJI Brdcsters, Inc.
KFOR	ak	100	CM(.25	) Lincoln, Nebr.	Cornbelt Brdcstg. Corp.
KFPW	ak	100		Fort Smith, Ark.	-Southwestern Hotel Co.
KFVS	ak	100	6 (.25)	Cape Girardeau, Mo.	-Hirsch Battery & Radio Co.
KFXM	ak	100			-Lee Bros. Brdc. Co.
KGLO	Z	100	С	Mason City, Iowa	Mason City Globe Gazette
KGY	ak	100		Olympia, Wash.	KGY, Inc.
KHBG	z	100	DP	Okmulgee, Okla.	KGY, Inc. Okmulgee Brdcstg. Corp.
KIUL	ak	100		Garden City, Kans. Carlsbad, N. Mex.	-Garden City Bracsig. Co.
KLAH	ak	100		Carlsbad, N. Mex.	-Carlsbad Brdcstg. Co.
KOCA	z	100		Kilgore, Texas Helena, Mont. Basedana, Calif	-Oil Capital Brdcstg. Ass'n.
KPFA	z	100	P (.25)	Helena, Mont.	-Peoples Forum of the Air
KPPC	ak	100	9	rasadena, Gam.	-Pas. Presb. Church
KROY	ak	100	D	Sacramento, Calif.	Royal Miller
KVSO	ak	100	M	Ardmore, Okla.	-Ardmoreite Pub. Co.
KWTN	ak	100		Watertown, S. Dak.	-Greater Kampeska Radio Corp.
WALR	ak	100		Zanesville, Ohio	-WALR Brdcstg. Corp.
WBAX	ak	100		Wilkes-Barre, Pa.	-John H. Stenger, Jr. Grace Presb. Church Herbert Lee Bly
WBBL	ak	100	S	Richmond, Va.	-Grace Presb. Church
WBLY	ak	100	D	Lima, Ohio	-Herbert Lee Bly
WBRB	ak	100	3	Red Bank, N. J.	-Monmouth Brdcstg. Co.
WCOL	ak	100	N	Columbus, Ohio	-WCOL, Inc.
WCRW		100	4	Chicago, Ill.	-Clinton R. White
WEBQ	ak	100	6 (.25)	Harrisburg, Ill.	-Harrisburg Brdestg. Co.
WEDČ	ak	100	4	Harrisburg, Ill. Chicago, Ill.	-Emil Denemark
WFAS	ak	100	3	White Plains, N. Y.	-Westchester Brdcstg. Corp.
WFOY	z	100		St. Augustine, Fla.	-Fountain of Youth Properties
WGBB	ak	100	3	Freeport, N. Y.	-Harry H. Carman
WGCM		100	(.25) 3	Gulfport, Miss.	-Harry H. Carman -WGCM, Inc.
WGNY	ak	100	3	Newburgh, N. Y.	—Peter Goelet
WHBF	ak	100	(.25)	Rock Island, Ill.	-R. I. Bracstg. Co.
WHBU	ak	100	(.25)	Anderson, Ind.	-Anderson Brdcstg. Corp.
WIBU	ak	100	(.25)	Poynette, Wis.	-Wm. C. Forrest
WJBY	ak	100	1	Gadsden, Ala.	-Gadsden Bracsig. Co.
WJEJ	ak	100	D	Hagerstown, Md.	-Hagerstown Brdcstg. Co.
WJIM	z	100	(.25)	Lansing, Mich.	-Harold G. Gross
WJTN	āk	100	B (.25)	Jamestown, N. Y.	-James Brdcstg. Co., Inc
WJW	ak	100	(.25)	Akron, Ohio	-WJW, Inc.
WKOK		100	(,	Sunbury, Pa.	-Sunbury Brdcstg. Corp.
WLMU		100	P (.25)	Middlesboro, Ky.	-Lincoln Mem. University
WMBC		100	RXZ(	.25) Richmond, Va.	-Havens & Martin
WMFC		100		Hibbing, Minn.	—Head of the Lakes Brdcstg. Co.
WMFN		100		Grenada, Miss.	-P. K. Ewing
WOMT		100		Manitowoc, Wis.	-Francis M. Kadow
WPAX	ak	100		Thomasville, Ga.	—H. Wimpy
WSAY	z	100		Rochester, N. Y.	-Brown Radio Serv.
WSBC	ak	100		Chicago, Ill.	-WSBC, Inc. -WSIX, Inc.
WSIX	ak	100		Nashville, Lenn.	-WSIX, Inc.
WSNJ	z	100	DP	Bridgeton, N. J. ) Charlotte, N. C.	-Eastern States Brdcstg, Corp.
wsoc	ãk	100	N (.25	) Charlotte, N. C.	WSOC, Inc.
WTAX		100		Springfield, Ill.	WSOC, Inc. WTAX, Inc.
XEAT	ak	250		Springfield, Ill. Parral, Chih.	—Box 90.
XEE	ak	50		Durango, Dgo. Juarez, Chih.	-Alejandro Stevens, Jr.
XĒFV	ak	100		Juarez, Chih.	—Jose Onofre Meza
XETH	ak	100		Puebla, Pue.	-Ramon Huerta G.
1220	) k	CVS.	. (245	5.8)	
1000	/	0,00	. (		
OME		50		Comoduoy Cuba	-Manuel Fernandez Hnos.
CMJE	z	50		Camaguey, Cuba Lawrence, Kans.	-University of Kans.
KFKU	ak	1000		Canta Darbare, Cal	-News Press Pub. Co.
KTMS	z	500	r en	Santa Barbara, Cal	- News Press Pub. Co. -First Presb. Church
KTW	ak			Seattle, Wash.	-State College of Wash.
KWSC				Pullman, Wash. Canton, N. Y.	-St. Lawrence University
WCAL				Dissoburgh Do	WCAE Inc.
WCAE	ak		MR (	5) Pittsburgh, Pa. Tampa, Fla.	WCAE, Inc. Tampa Times Co.
WDAE			) <u>C</u> (5)	lampa, Fla.	-WREN Brdcstg. Co.
WREN				Lawrence, Kans.	
XEBL	z	50		Mazatlan, Sin.	-Augusta Garcia Diaz
XEDA		200		Gra. Anaya, D. F.	-Jose R. Lopez
XETF	ak	: 30	)	Veracruz, Ver.	- 403C IV, DOLOR
100	1 1-		121	2 9)	
123	JК	cys	. (24)	J.O/	
		•			a lu de la Pedestá Co

KGBXak500Springfield, Mo.Springfield Brdcstg. Co.KGCMak1000Albuquerque, N. M.--N. Mex. Brdcstg. Co.KYAak1000(5)San Francisco, Cal.--Hearst Radio, Inc.WFBMak1000C (5)Indianapolis, Ind.--Ind. Power & Light Co.

NORTH AMERICAN B. C. STATIONS BY FREQUENCIES WNAC ak 1000 R (5) Boston, Mass -Yankee Network, Inc. -Rodolfo Junco de la Vega XEFJ ak 100 Monterrey, N. L. 1240 kcys. (241.8) CJCB ak 1000 F Syndey, N. S. —N. Nathanson Sancti Spiritus, Cuba—V. E. Weiss y Cia. CMHB 7. 50 Mandan, N. Dak. Minot, N. Dak. Fort Worth, Texas Twin Falls, Idaho San Juan, P. R. Detroit, Mich. Mexico City, D. F. Loon Guan ak KGCU 250 -Mandan Radio Ass'n. 1 KLPM John B. Cooley Tarrant Brdcstg. Co. ak 250 1 KTAT ak 1000 M -Radio Brdcstg. Corp. -Radio Corp. of P. R. -King-Trendle Brdcstg. Corp. KTFI ak 1000 WKAO WXYŻ ak 1000 ak B 1000 XEAY XEKL z 100 Fernando Magallanes Z 500 Leon, Guan. Cia. Radio del Bajio XELA 50 Saltillo, Coah. z -Enrique Gomez 1250 kcys. (239.9)CMCK яk 150 Santiago, Cuba -J. A. Saco KFOX ak 1000 -Nichols & Warinner, Inc. Long Beach, Calif WAIR 250 Winst.-Salem, N. C. ak D -Radio Station WAIR WCAL 2 (2.5) ah 1000 Northfield, Minn. St. Olaf College WDSU B ak 1000 New Orleans, La. WDSU, Inc. -May Radio Brdcstg. Corp. --University of Minn. --Wodaam Corp. WHBI ak 1000 a (2.5) Newark, N. J. 2 Minneapolis, Minn. a (2.5) New York, N. Y. 2B (5) Minneapolis, Minn. WLB 1000 ak WNEW ak 1000 1000 WTCN ak -Minn. Brdcstg. Corp. -Ayuntamiento S.L.P. XEXH 250 San Luis Pot., S.L.P. z 1260 kcys. (238.0) –Del Valle, Valdez y Cia. –Mosby's, Inc. –Golden Empire Brdcstg. Co. CMOK 7. 150 Havana, Cuba  $\dot{\mathbf{C}}$ KGVO KHSL ak 1000 Missoula, Mont. ak 250 Chico, Calif. BM(2.5) Omaha, Nebr. -Central States Brdcstg. Co. 1000 KOIL ak KPAC 500 Port Arthur, Texas ak D -Port Arthur College -KRGV, Inc. -KUOA, Inc. KRGV KUOA KVOA Weslaco, Texas Siloam Spgs., Ark. 1000 ak в ak 2500 D 1000 Tucson, Ariz. Dayton, Ohio -Ariz. Brdcstg. Co., Inc. -Dayton Daily News -WNBX Brdctsgd. Corp. ak C (5) WHIO ak 1000 WNBX c ak 1000 Springfield, Vt. Savannah Brdcstg. Co. WTOC ak 1000 Savannah, Ga. 1270 kcys. (236.1)CMHD dk 250 Caibarien, Cuba Decorah, Iowa Seattle, Wash. -Manuel Alvarez M. -Chas. W. Greenley -Seattle Brdcstg. Co KGCA ak 100 2D KOL KVOR C (5) C ak 1000 ak 1000 Colo. Springs, Colo. Decorah, Iowa Out West Brdcstg. Co. KWLC žD -Luther College ak 100 WASH DaNX Grd. Rpds., Mich. Baltimore, Md. King-Trendle Brdcstg. Corp. ak 500 R (1) Baltimore, Max. N (2,5) Jackson, Miss. NaX Gd. Rapids, Mich. -Balt. Radio Show, Inc. WFBR ak 500 WJDX ak 1000 Lamar Life Insurance Co. -King-Trendle Brdcstg. Corp. -Gobierno del E. de Ver. WOOD ak 500 XEXB ak 50 1280 kcys. (234.2) CMCU ak 500 Havana, Cuba СМКО z Holguin, Cuba C (2.5) Great Falls, Mont. 1000 -Buttrey Brdcstg. Co. -Warner Bros. -City of Camden KFBB ak KLS ak 250 Oakland, Calif. Camden, N. J. WCAM ak 500 1 -Radio Industries Brdcstg. Co. WCAP ak 500 Asbury Park, N. J. WDOD ak 1000 Č (5) N (5) Chattanooga, Tenn. Madison, Wis. WIBA ak 1000 WORC ak 500 C Worcester, Mass. Dallas, Texas WRR ak 500 M WTNJ 500 1 ak Trenton, N. J. Mexico City, D. F. XEMX 100 z 1290 kcvs. (232.4) **KDYL** ak 1000 RX Salt Lake City, Ut. -Intermountain Brdcstg. Corp.

KLCN KTRH	ak ak	100 1000 1000	D C (5) N (5)	Blytheville, Ark. Houston, Texas Duluth, Minn.	-C. L. Lintzenich -KTRH Brdcstg. Co. -Head of the Lakes Brdcstg. Co.
WEBC WJAS WNBZ WNEL	ak ak ak ak	1000 1000 100 1000	C (5) D (2.5)	Pittsburgh, Pa. Saranac Lake, N. Y. San Juan, P. R.	-Pitt Radio Supply House -Smith & Mace -Juan Piza, Box 1252
1300	kc	ys.	(230	.6)	
KALE KFAC	ak ak ak	500 1000 1000	C C (5)	Portland, Ore. Los Angeles, Calif. Wichita Kons	KALE, Inc. L. A. Brdestg. Co., Inc. Station KFII
KFH WBBR WEVD	ak ak	1000 1000	1	Wichita, Kans. Brooklyn, N. Y. New York, N. Y. New York, N. Y.	People's Pulpit Ass'n. Debs Memorial Radio Fund
WFAB WFBC	ak ak	1000 1000	1 N (5)	New York, N. Y. Greenville, S. C. Troy, N. Y.	
WHAZ WHBL WIOD	ak ak ak	500 250 1000	X1 N	Sheboygan, Wis. Miami, Fla.	<ul> <li>Rensselaer Polytechnic Inst.</li> <li>Press Pub. Co.</li> <li>Isle of Dreams Brdcstg. Corp.</li> </ul>
1310	kc	ys.	(228	.9)	
CHCK CJKL	ak ak	50 100	F	Charlottetown, P.E.I Kirkland Lake, Ont.	-Burke & Gesner. -Northern Brdcstg. Co.
CJLS CKCV	ak ak	100 100	F	Yarmouth, N. S.	-Laurie L. Smith -CKCV, Ltd.
KAND	z	100 100	Ď	Quebec, P. Q. Corsicana, Tex. Kansas City, Kans	-Navarro Brdeste, Ass'n.
KCKN KCRJ	ak ak	100	DX	Kansas City, Kans. Jerome, Ariz. Dublin, Texas	KCKN Brdestg. Co. Chas, C. Robinson C. C. Baxter, Box 176
KFPL KFXR KFYO	dk ak	$100 \\ 100$	(.25) (.25)	Dublin, Texas Okla. City, Okla. Lubbock, Texas	-Exchange Ave. Bap. Church
KFYO KGEZ	ak ak	100 100	(.25)	Kalispell, Mont.	—Plains Radio Brdcstg. Co. —Donald C. Treloar
KGFW KHUB	ak z	100 250	D	Kearney, Nebr. Watsonville, Calif.	—Cent. Nebr. Brdcstg. Corp. —Anna Atkinson
KINY KIT	ak ak	100 100		Juneau, Alaska 5) Yakima, Wash.	Edwin A. Kraft Carl E. Haymond
KPDN	ak	100	D	Pampa, Texas	R. C. Hoiles 
KRMD KROC	ak ak	$\begin{array}{c} 100 \\ 100 \end{array}$	(.25)	Shreveport, La. Rochester, Minn.	-So. Minn. Brdcstg. Co.
KRQA KRRV	ak z	100 250	D	Rochester, Minn. Santa Fe, N. Mex. Sherman, Texas	-J. Laurance Martin Red River Valley Brdcstg. Corp.
KSRO KSUB	Z Z	250 250 100	DP P	Santa Rosa, Calif. Cedar City, Utah	Press-Democrat Pub. Co. Johnson & Perry
KTSM	ak	100 100	(.25)	El Paso, Texas	-Tri-State Brdcstg. Co.
KVOL KVOX	ak z	100	P	Lafayette, La. Moorhead, Minn.	Evangeline Brdcstg. Co. Robert K. Herbst
KWOS KXRO	z ak	100 100	D 	Jefferson City, Mo. Aberdeen, Wash.	-Tribune Ptg. Co. KXRO, Inc.
WAML WBEO	ak ak	$\begin{array}{c}100\\100\end{array}$	<b>D</b>	Laurel, Miss. Marquette, Mich.	-New Laurel Radio Station -Lake Superior Brdcstg. Co.
WBOW WBRE	ak ak	$\begin{array}{c}100\\100\end{array}$	B (.25)	Terre Haute. Ind. Wilkes-Barre, Pa.	-Banks of the Wabash, Inc. -Louis G. Baltimore -WCLS, Inc.
WCLS	ak	100	( )5)		-WCLS, Inc. -Ashland Brdestg. Co.
WCMI WDAH	ak ak	$\begin{array}{c} 100 \\ 100 \end{array}$	S (.25)	Joliet, Ill. Ashland, Ky. El Paso, Texas Buffalo, N. Y. Milwaukee, Wis.	-Tri-State Brdcstg. Co.
WEBR WEMP	ak ak	$\begin{array}{c} 100 \\ 100 \end{array}$	B (.25) D		-WEBR, Inc. -Milwaukee Brdcstg, Co.
WEXL WFBG	ak ak	50 100	3	Royal Oak, Mich. Altoona, Pa.	Royal Oak Brdcstg. Co. Gable Brdcstg. Co. Flint Brdcstg. Co.
WFDF WGH	ak ak	100 100	(.25)	Flint, Mich. Newport News, Va.	-Flint Brdcstg. Co. -Hampton Roads Brdcstg. Corp.
WGTM	Z	100	DP	Wilson, N. C.	-H. W. Wilson and Ben Farmer
WHAT WJAC	ak ak	100 100	<sup>4</sup> 3 (.25)	Philadelphia, Pa. Johnstown, Pa.	-Independence Brdcstg. Co. -WJAC, Inc.
WLAK WLBC	z ak	$\begin{array}{c} 100 \\ 100 \end{array}$	(.25) M	Lakeland, Fla. Muncie, Ind.	—Lake Region Brdcstg. Co. —Donald A. Burton
WLNH WMBO	ak ak	100 100	м	Laconia, N. II. Auburn, N. Y.	-Northern Brdcstg. Co. -WMBO, Inc.
WMFF WNBH	ak ak	100 100	(.25) M (.25	Auburn, N. Y. Plattsburg, N. Y. ) New Bedford, Mass. Washington, D. C.	-Plattsburg Brdcstg. Corp. -E. Anthony & Sons, Inc.
WOL	ak	100	MXZ	Washington, D. C.	-American Bracste, Co.
WRAW WROL	ak ak	$100 \\ 100$	B(.25)	Knoxville, Tenn.	-Reading Brdcstg. Co. -Stuart Brdcstg. Corp.
WSAJ WSGN	ak ak	$100 \\ 100$	B (.25)	Grove City, Pa. Birmingham, Ala.	-Grove City College -Birmingham News Co.
WSJS WTAL	ak ak	100 100	С	Winston-Salem, N. C Tallahassee, Fla.	.—WS. Journal Co. —Fla. Capital Brdcsters, Inc.

WTEL 100 Philadelphia, Pa. c -Foulkrod Radio Eng. Co. WTJS ak 100 (.25) Jackson, Tenn. Elkhart, Ind. Sun Pub. Co., Inc. WTRC (.25) Truth Pub. Co., Inc. ak 100 XEAG z 10 Cordoba, Ver. Mexico City, D. F. Tampico, Tams. Torreon, Coah. -Diodora Zuniga XECW āk 10 Ma, Elena Bravo de Cordero XEFW ak 250 Jose Expedito Martinez XETB 125 125 ak -P. O. Box 225 -L. F. Petit Jean XEX ak Monterrey, N. L. P Fresno, Calif. Lufkin, Texas 100 z George Harm ĎΡ Z 100 Red Lands Brdcstg. Assn. ..... 100 P(.25) Pittsfield, Mass. z . . . . . . -Harold Thomas 1320 kcys. (227.1)CMOX Havana, Cuba Pueblo, Colo. Honolulu, Hawali ak 200 KGHF KGMB KID 500 B am СM ak 1000 ak 500 (1)Idaho Falls, Idaho Des Moines, Iowa -KID Brdcstg. Co. KRNT ak 1000 Č (5) -Iowa Brdcstg. Co. -Allen T. Simmons -York Brdcstg. Co. WADC ak 1000 Ĉ Akron, Ohio York, Pa. WORK ak 1000 B WSMB ak 1000 N New Orleans, La. -WSMB, Inc. 1330 kcys. (225.4) CMHK 250 z Cruces, Cuba -Virgilio Villanueva KGB KMO ak 1000 M San Diego, Calif. Tacoma, Wash. -Don Lee Brdcstg. Sys. -KMO, Inc. -Gulf Coast Brdcstg. Co. 1000 ak KRIS KSCJ WDRC BP Corpus Christi, Tex. 500 BP C (5) Sioux Cu.s., C (5) Hartford, Conn. MR(2.5) Cincinnati, Ohio C Green Bay, Wis. 7. āk 1000 Sioux City Journal ak 1000 -WDRC, Inc. -Crosley Radio Corp. -WHBY, Inc. WSA1 1000 ak WTAO 1000 ak 1340 kcys. (223.7) Pinar del Rio, Cuba
 Camaguey, Cuba
 Huron, S. Dak.
 N (25) Butte, Mont.
 Dodge City, Kans.
 CX Pensacola, Fla.
 BM(1) Macchanet N. Li CMAB CMJL KGDY z Hotel Ricardo . . M. Caymares, Republica 181 z 75 250 voice of S. Dak., Inc. ak -Voice of S. Dak., Inc. -KGIR, Inc. -Dodge City Brdcstg. Co. -Pensacola Brdcstg. Co. KGIR ak 1000 KGNO ak 250 WCOA ak 500 WFEA ak 500  $\tilde{BM}(1)$ Manchester, N. H. N. H. Brdcstg. Co. ak Toledo, Ohio Jalapa, Ver. WSPD 1000 B (5) The Fort Industry Co XEXD 350 7. Gobierno del E. de Ver. DP 7 500 Dubuque, Iowa Telegraph Herald 1350 kcys. (222.1)CMCA CMKW ---Testar y Gonzales --Reparto Vista Alegre 450 ak Havana, Cuba 7. B (2.5) Boise, Idaho 1000 -Boise Brdcstg. Station -Thomas Patrick, Inc. -Pillar of Fire -WBNX Brdcstg. Co. KIDO ak BM(5) St. Louis, Mo. 1 (1) Zarephath, N. J. 1 New York, N. Y. KWK ak 1000 WAWZ WBNX ak 500 ak 1000 1360 kcys. (220.4)CMJH dk 50 Clego de Avila, Cuba -Luis Marauri H. KCRC ak 250 M Enid, Okla. Long Beach, Calif. -Enid Radiophone Co. KGER WCSC 1000 ak -Consolidated Brdc. Corp. N (1) C (5) <u>1</u> (1) 500 ak Charleston, S. C. Syracuse, N. Y. -S. C. Brdcstg. Co. WFBL ak 1000 Onondaga Radio Brdcstg. Corp. WGES -Oak Leaves Brdestg, Sta. -Delta Brdestg, Co., Inc. -South Bend Tribune ak 500 Chicago, III. WQBC Vicksburg, Miss. ak 1000 D WSBT ak 500 South Bend, Ind. 1 1370 kcys. (218.8) CKCW CMGE  $\mathbf{ak}$ 100 F Moncton, N. B. Gardenas, Cuba -Moncton Brdcstg. Co. ak 150 \_ -Genaro Sebater KAST KCMO Ď Astoria, Ore. Kansas City, Mo. Seattle, Wash. ak 100 Astoria Brdcstg. Co. ak 100 KCMO Brdestg. Co. KEEN ak 100 1 KVL, Inc. KELD El Dorado, Ark z 100 Radio Enterprises, Inc. McClatchey Brdcstg. Co. KERN ak 100 B Bakersfield, Calif.

KFGO	ak	100	D	Boone, Iowa	-Boone Biblical College
KFJZ	ak	100	(.25)	Fort Worth, Texas	-Ft. Worth Brdcsters, Inc.
KFRO	ak	250	D	Longview, Texas	-Voice of Longview
KGAR	ak	100	(.25)	Tucson, Arizona	-Tucson Motor Service
KGFL	ak	100	4	Roswell, N. Mex.	KGFL, Inc. KGKL, Inc.
KGKL	ak	100	(.25)	San Angelo, Texas	KGKL, Inc.
KICA	ak	100	4	Clovis, N. Mex.	-Western Brdcsters., Inc.
KIUP	ak	100		Durango, Colo.	-San Juan Brdcstg, Co.
KLUF	ak	100	17/200	Galveston, Texas	-Geo. R. Clough -W. W. McAllister
KMAC	ak	100	5 (.25)	San Antonio, Tex.	-W. W. McAllister
KOBH	ak	100	P	Rapid City, S. Dak.	-Black Hills Brdcstg. Co.
KOKO KONO	Z	100 100		La Junta, Colo.	Southwest Brdcstg. Co. Mission Brdcstg. Co.
KRE	ak ak	100	5 (.25)	San Antonio, Tex. Borkeley, Calif	-Cent. Calif. Brdc., Inc.
KRKO	ak	50	1	Berkeley, Calif. Everett, Wash.	-Lee Mudgett
KRMC	Z	100	(.25)	Jamestown, N. D.	-Roberts McNab Co.
KSLM	ak	100	(	Salem. Ore.	-Oregon Radio, Inc.
KTEM	z	250	D	Temple, Texas	-Bell Brdcstg. Co.
KTOK	Бk	100	M	Oklahoma City, Ok.	-Okla, Brdcstg, Co.
KUJ	ak	100		Walla Walla, Wash,	-KUJ, Inc.
KVGB	z	100		Walla Walla, Wash. Great Bend, Kans.	-Ernest Edward Ruehlen
KWYO	ak	100	(.25)	Sheridan, Wyo.	-Big Horn Brdcstg. Co.
WABY	ak	100	Ъ ́	Albany, N. Y.	-Adirondack Brdcstg. Co.
WAGF	ak	250	D	Dothan, Ala,	Dothan Brdcstg, Co.
WATL	ak	100	(.25)	Atlanta, Ga.	—Atlanta Brdcstg. Co.
WBLK	ak	100	D	Clarksburg, W. Va. Buffalo, N. Y.	The Exponent Corp.
WBNY	ak	100	2 (.25)	Buffalo, N. Y.	-Roy L. Albertson
WBTM	ak	100	(.25)	Danville, Va.	-Piedmont Brdcstg. Corp.
WCBM	ak	100	(.25)	Baltimore, Md.	-Baltimore, Brdcstg. Co.
WDAS	ak	100	(.25)	Philadelphia, Pa.	-WDAS Brdcstg. Station, In
WDWS	ak	100	D	Champaign, Ill.	-Champ. News-Gazette, Ind
WEOA	z	100	(.25)	Evansville, Ind.	-Evans. on the Air, Inc.
WFOR	ak	100	1.22.1	Hattiesburg, Miss.	-Forrest Brdcstg. Co.
WGL	ak	100	n i i i i	Fort Wayne, Ind.	-Westinghouse Radio Sta., I
WGRC WHBQ	ak	250 100	D	New Albany, Ind.	North Side Brdcstg. Corp.
WHDF	ak ak	100	(.25)	Memphis, Tenn. Calumet, Mich.	-WHBQ, Inc. Upper Mich. Brdcstg. Corp
WHLB	ak	100	(.23)	Virginia, Minn.	-Head of the Lakes Brdcstg
WIBM	ak	100	(.25)	Jackson, Mich.	-WIBM, Inc.
WLLH	ak	100		25) Lowell, Mass.	-Merrimac Brdcstg. Co.
WMBR	ak	100		Jacksonville, Fla.	-Fla. Brdcstg. Co.
WMFD	ak	100	Ď`	Wilmington, N. C.	-Richard A. Dunlea
WMFO	ak	100	D	Decatur, Ala.	-James R. Doss, Jr.
WMIN	ak	100	(.25)	St. Paul, Minn.	-WMIN Brdcstg. Co.
woc	ak	100	C (.25)	Davenport, lowa	-Tri-City Brdestg. Co.
WPAY	ak	100	2.911	Portsmouth, Ohio	-Veebee Corp.
WPRA	z.	100	(.25) P	Mayaguez, P. R.	-P. R. Advertising Co.
WRAK	ak	100	(.25)	Williamsport, Pa.	-WRAK, Inc. -WRDO, Inc.
WRDO	ak	100	M	Augusta, Maine	-WRDO, Inc.
WRJN	ak	100	(.25)	Racine, Wis	-Racine Brdcstg. Corp.
WSAU	z	100	Ď	Wausau, Wis.	-Northern Brdcstg. Co.
WSVS XECZ	ak	50	2D	Buffalo, N. Y.	-Seneca Voc. High School
XEI	z	100		San L. Pot., S.L.P.	-Zeferino Z. Jimenez
XELZ	ak	125		Morelia, Mich.	-Carlos Gutierrez M.
	z z 10	100	SyP	Mexico City, D. F.	Aureliano Mirabel
	2 10	-100	зуг	Lawrence, Mass.	-Merrimac Brdcstg. Co.
1200	1		(217	2)	
1380	ĸe	ys.	(217	.3/	
КОН	ak	500	С	Reno, Nevada	—The Bee, Inc.
KÖV	ak	500	či	Pittsburgh, Pa.	-KQV Brdcstg. Co.
WĂLA	ak	500	<b>Č</b> (1)	Mobile, Ala.	-Pape Brdcstg. Co.
WKBH	ak	100	č	La Crosse Wis	

tern Brdcsters., Inc. Juan Brdcstg, Co. . R. Clough W. McAllister W. McAllister :k Hills Brdcstg. Co. thwest Brdcstg. Co. t. Callf. Brdc., Inc. Mudgett erts McNab Co. gon Radio, Inc. Brdcstg. Co. Brdcstg. Co. . Brdcstg. Co. , Inc. st Edward Ruehlen Horn Brdcstg. Co. hondack Brdcstg. Co. han Brdcstg. Co. nta Brdcstg. Co. Exponent Corp. L. Albertson mont Brdcstg. Corp. more, Brdcstg. Co. AS Brdcstg. Station, Inc. mp. News-Gazette, Inc. is, on the Air, Inc. est Brdcstg. Co. tinghouse Radio Sta., Inc. h Side Brdcstg. Corp. BQ, Inc. er Mich. Brdcstg. Corp. l of the Lakes Brdcstg. Co. M, Inc imac Brdcstg. Co. Brdcstg. Co. nard A. Dunlea es R. Doss, Jr. IN Brdcstg. Co. City Brdestg. Co. bee Corp. . Advertising Co. K, Inc. DO, Inc. ne Brdcstg. Corp. hern Brdcstg. Co. ca Voc. High School tino Z. Jimenez os Gutierrez M. liano Mirabel rimac Brdcstg. Co.

٩

KOH	ak ak	500 500	C.	Reno, Nevada
KOV WALA	ak	500	C1 C (1)	Pittsburgh, Pa. Mobile, Ala.
WKBH WNBC	ak ak	100 250	C D	La Crosse, Wis. New Britain, Conn.
WSMK	ak	200	C 1	Dayton, Ohio

Bee, Inc. Brdcstg. Co. Brdcstg. Co. -WKBH, Inc. -State Brdcstg. Corp. -WSMK, Inc.

#### 1390 kcys. (215.7)

CJGX	ak	100	F	Yorkton, Sask,	-J. Richardson & Sons, Ltd.
CMJC	z	150		Camaguey, Cuba	Felix Sanchez
KLRA	ak	1000	C (5)	Little Rock, Ark.	-Ark, Brdestg, Co,
KOY	ak	1000	C	Phoenix, Ariz.	-Salt River Brdcstg. Co.
KRLC	ak	250		Lewiston, Idaho	-H. E. Studebaker
WHK	$\mathbf{a}\mathbf{k}$	1000	C (2.5)	Cleveland, Ohio	-Radio Air Corp.
WQDM	dk	1000	D	St. Albans, Vt.	-Regan & Bostwick

1400	key	vs.	(214	.2)	[]	
					Dago Cubo	Oscar Machasa
CMGC CKKR	ad z	150 100		Santi	nzas, Cuba iago, Cuba	—Oscar Mechoso —Jaime Nadal
KHBC	ak	250	CM	Hilo,	iago, Cuba , T. H. n, Utah	-Honolulu Brdcstg. Co., Ltd.
KLO KTUL	ak ak	500 500	B C (1)	Tulsa	n, Utan a, Okla,	-Honolulu Brdcstg. Co., Ltd. -Interstate Brdcstg. Corp. -Tulsa Brdcstg. Co., Inc.
WBBC	ak	500	2(1)	Brool	klyn, N. Y.	-Brooklyn Brdcstg, Corp.
WHDL WIRE	ak ak 1	250 000	D MR (5)	Olear	n, N. Y. anapolis, Ind.	WHDL, Inc. Indianapolis Brdcstg., Inc
WVFW	ak	500	2	Brool	klyn, N. Y.	-Paramount Brdcstg. Co.
1410	key	78	(212)	6)		
1 110	мсj		(212	)	L	
CKFC	ak	50	5	Vanc	ouver, B. C.	-Standard Brdcstg. System, Ltd. -British Columbia Brdcstg., Ltd.
CKMO CMCQ	ak ak	100 250	5F		ouver, B. C. na, Cuba	-Calle Vista Alegre 90
KFJM	ak	500	(1)	Gran	d Forks, N. D.	
KGNC KMED	ak 1 ck	000 250	(2.5) B	Amai	rillo, Texas ord, Ore,	Plains Radio Brdcstg. Co. Mrs. W. J. Virgin
WAAB	ak	500	M (1)	Boste	on, Mass.	— Yankee Network, Inc.
WBCM	ak	500	X	Bay (	lity, Mich.	-James E. Davidson -Daily Telegraph Ptg. Co.
WHIS WROK	ak ak	500 500	(1) (1)		field, W. Va. ford, Ill.	-Rockford Broadcasters, Inc.
WSFA	ak	500	Č (1)		gomery, Ala.	-Montgomery Brdcstg. Co., Inc.
1420	kcy	/s.	(211	.1)		
	ak	100	F		mine Ont	Northann Brdantd, Co. 1 td
CKGB CRCY	ak	100	r F	Toro	nins, Ont. uto, Ont.	—Northern Brdcstg. Co., Ltd. —Canadian Brdcstg. Corp.
KABC	ak	100	(.25)	San A	nto, Ont. Antonio, Texas deen, S. D.	-Alamo Brdcstg. Co., Inc.
KABR Kate	ak z	100 250	DP	Alber	deen, S. D. 't Lea, Minn,	—Aberdeen Brdcstg. Co. —Albert Lea Brdcstg. Corp.
KBPS	ak	100	4		and, Ore.	-Benson Polytechnic School -KCMC, Inc.
ксмс	ak	100	(.25)	Texa	rkana, Tex.	-KCMC, Inc.
KEUB KFIZ	ak ak	100 100			, Utah du Lac, Wis.	-Eastern Utah Brdcstg. Co. -Reporter Printing Co.
KGFF	ak	100	(.25) M	[ Shav	vnee, Okla.	-KGFF, Inc
WGGC	ak ak	100 100	1		Francisco, Cal.	-Golden Gate Brdcstg. Co. -Leonard E. Wilson -Southwest Brdcstg. Co. -J. H. Hawkins & B. H. Tubbs
KGIW KIDW	ak	100	1	Lama	iosa, Colo. ar, Colo.	-Southwest Brdcstg. Co.
KIUN	ak	100	1.4.1.1	Peco	ar, Colo. s, Texas	-J. H. Hawkins & B. H. Tubbs
KLBM KNET	Z Z	100 100	(.25) P D	Pales	rande, Ore. tine, Texas	—Harold M. Finley —Palestine Brdcstg. Ass'n.
KORE	ak	100		Euge	ne, Ore. ne, Texas	-Eugene Brdcstg. Station
KRBC	ak	100	(.25) D	Abile	ne, Texas and, Texas	-Reporter Brdcstg, Co.
KRLH KUMA	z ak	100 100	<b>D</b>		a, Ariz.	Clarence Scharbaur Dr. A. H. Schermann W. N. Greenwald
KWBG	ak	100		Hute	hnison, Kans.	-W. N. Greenwald
KXL WACO	ak ak	100 100	4 (.25) C	Waco	and, Ore. 9, Téxas	KXL Broadcasters KTSA Brdcstg. Co.
WAGM	ak	100		Presq	ue Isle, Me.	—Aroostook Brdcstg. Corp.
WAPO WAZL	ak	100 100	D	Chat	tanooga, Tenn. eton, Pa.	-W. A. Patterson -Hazleton Brdcstg. Serv., Inc.
WCBS	ak ak	100	2	Sprin	ngfield, Ill.	-WCBS Inc
WCHV	ak	100	3 (.25)	Char	lottesville, Va.	-Community Brdcstg. Corp.
WEED WELL	ak ak	100 100	3 (.25)	- Rock Battl	y Mount, N. C. le Creek, Mich.	Community Brdcstg. Corp. Wm. Avera Wynne, Box 221 Enquirer News Co. Americus Brdcstg. Corp. WIEC Loss 6/28 Cormole Bd
WGPC	ak	100		Albai	ny, Ga. o, Ill.	-Americus Brdcstg. Corp.
WHFC WILM	ak aj	100 100	(.25)	Cicer	o, Ill. nington, Del.	
WJBO	ak	100	<b>B</b> XZ	Bato	n Rouge, La.	-Baton Roude Brdgete Co. Inc.
WJBR	z	100	Р	Gast	onia, N. C.	-J. B. Roberts
WJMS WLAP	ak ak	100 100	(.25)	irony	wood, Mich. agton. Ky.	-J. B. Roberts -WJMS, Inc., St. James Hotel -American Brdcstg. Corp.
WLEU	ak	100	(.25) B	Erie,	Pa.	Leo J. Omenan, Commerce Diug.
WMAS	ak	100	C (.25)	Sprin	ogfield, Mass.	WMAS, Inc., Hotel Stonehaven Michigan Brdcstg. Co.
WMBC WMBH	ak ak	100	(.25) (.25)		oit. Mich. n. Mo.	-Joplin Brdestg, Co.
WMBS	z	250	ĎP ′	Unio	ntown, Pa.	-Fayette Brdcstg. Corp.
WMFJ ₩MSD	ak ak	100 100			ona Bch., Fla. 'ield, Ala.	-W. W. Esch -Muscle Shoals Brdcstg. Corp.
WNNY	z	100		Wate	rtown, N. Y.	-Black River Valley Broadcasts, Inc.
WPAD	ak	100 100	(.25)	Padu	cah, Ky.	-Paducah Brdestg. Co., Inc.
WPAR	ak	104	С	CALK	ersburg, W. V.	-Ohio Valley Brdcstg. Corp.

NORTH AMERICAN B. C. STATIONS BY FREQUENCIES Ponce, Puerto Rico Julio M. Conesa (.25) WPRP z 100 (.25) P Sioux City, Iowa -Sioux City Brdcstg. Co. 100 z 1430 kcys. (209.7) -Cesar Canall, Callejas 80 Moron, Cuba CMJP ak 75 (5) B Los Angeles, Cal.
 D North Platte, Neb.
 BM(2.5) Des Moines, Iowa
 C (1) Columbus, Ohio
 C (1) Rochester, N. Y.
 C (1) Horrichter Press -E. C. Anthony, Inc. -Great Plains Brdcstg. Co. 1009 KECA ak KGNF ak 1000 -Oreat Franks Brocky, Co. -Iwas Brodestg. Co. -WBNS, Inc., 33 N. High St. -WHPC, Inc., 40 Franklin St. -WHP, Inc., 216 Locust St. -Memphis Commercial Appeal Work? KSO ak 500 WBNS C (1) C (1) C (1) 500 ak WHEC ak 500 Harrisburg, Pa. Memphis, Tenn. Albany, N. Y. WHP ak 500 WNBR ak 500 (1) B WOKO, Inc., Hotel Ten Eyck Č(1) ak 500 WOKO 1440 kcys. (208.2)Havana, Cuba Casper, Wyo. Houston, Texas Juan Fernandez Duran CMOA KDFN KXYZ 150 Z -Donald Lewis Hathaway ak 500 B -Harris County Brdcstg. Co. -N. C. Brdcstg. Co., Inc. 1000 ak Greensboro, N. C. WBIG С ak 1000 Allentown, Pa. Peoria, Ill. B. B. Musselman WCBA 500  ${a \atop C(1)X}$ aj ak Peorla Brdcstg. Co. WSAN, Inc., 39 Tenth St. WMBD 500 Allentown, Pa WSAN 500 Bà aj ak Feliciano Lopez Isles XEFI 250 Chihuahua, Chih. P Central Brdcstg. Corp. 500 Centralia, Wash. 7 1450 kcys. (206.8) -Victoria Brdcstg. Assn. -R. T. Holman, Ltd. F Victoria, B. C. CFCT ak 50 Summerside, P.E.I. CHGS ak 50 Cienfuegos, Cuba Wolf Point, Mont. Hotel Union CMHM Z 100 . . . . . E. E. Krebsbach KGCX ak 1000 -E. D. RIEUSDACH -Redwood Brdestg. Co., Inc. -Tri-State Brdestg. System, Inc. -WGAR Brdestg. Co. -New Jersey Brdestg. Corp. -Doughty & Welch Elec. Co., Inc. - Liboety Redextd. Co. N . . . . KIEM ak 500 Eureka, Calif. Shreveport, La KTBS WGAR ak 1000 500 MB (1) Cleveland, Ohio ak Jersey City, N. J. Fall River, Mass. 250 WHOM ak 1000 M WSAR ak Liberty Brdcstg. Co. 500 R Atlanta, Ga. WT'FI ak Juarez, Chih. Box 70 XEF ak 100 (205.4)1460 kcys. Holguin, Cuba R (25) St. Paul, Minn. Manuel J. DeGongora 250 CMKE 7. National Battery Brdcstg. Co. KSTP ak 10000 Columbia Brdcstg. System WJSV ak 10000 ĉ Washington, D. C. 1470 kcys. (204.0) -Louis Wasmer ak 5000 ak 5000 Spokane, Wash. Nashville, Tenn. KGA B č -WLAC, Inc. WLAC 1480 kcys. (202.6) -Hearst Radio, Inc. Oklahoma City, Ok. KOMA ak 5000 C -Hammond-Calumet Brdcstg. Corp. WHIP 5000 DP Hammond, Ind. Buffalo, N. Y. WHIP z WKBW ak -Buffalo Brdestg. Corp. 5000 C 1490 kcys. (201.2) -McClatchey Brdcstg. Co. Sacramento, Calif. KFBK ak 5000 Covington, Ky. WCKY ak 5000 ВX -L. B. Wilson, Inc. 1500 kcys. (199.9) -Hyland & Whitby S. S. Marie, Ont. CJIC KAWM ak 100 -A. W. Mille Gallup, N. Mex. 100 Z Muskogee Press M Muskogee, Okla. 100 KBIX ak -Big Spring Herald Brdcstg. Co. -Red River Brdcstg. Co., Inc. Big Spring, Texas 100 KBST 7. Duluth, Minn. KDAL ak 100 -Ked Kiver Bracsig. Co., Inc. -Santa Barbara Brdcsters., Ltd. -Eagle Brdcstg. Co., Inc. -Fast Texas Brdcstg. Co. M(.25) Santa Barbara, Cal. Y(.25) Corp. Christi, Tex. (.25) Tyler, Texas KDB ak 100 KGFI ak 100 KGKB ak 100 -Hilliard Co., Inc. Scottsbluff, Neb. KGKY ak 100 (.25)

AART SHOLAST		_			
KNEL	ak	250	D	Brady, Texas	G. L. Burns, Box 1077
KNOW	ak	100	Ē	Austin, Texas	-KUT Brdcstg. Co.
KOTN	ak	100	Đ	Pine Bluff, Ark.	-Universal Brdcstg. Corp.
KOVC	ak	100		Valley City, N. D.	-KOVC, Inc.
KPLC	ak	100	(.25)	Lake Charles, La.	-Calcasieu Brdcstg. Co.
KPLT	z	250	Ď	Paris, Texas	-North Texas Brdcstg. Co.
KPQ	ak	100	(.25)	Wenatchee, Wash.	-Wescoast Brdcstg. Co.
KRNR	ak	100	(.25)	Roseburg, Ore.	-News-Review Co.
KROD	ak	100	P	El Paso, Texas	-Dorrence D. Roderick
KSAL	ak	100	(.25)	Salina, Kans.	-R. J. Laubengayer
KUTA	z	100	P	Salt Lake City, Ut.	-Utah Broadcasting Co.
KVOE	ak	100	М	Santa Ana, Calif.	-Voice of Orange Empire, Ltd.
KXO	ak	100	17.50	El Centro, Calif.	-F. M. Bowles, Box 140
WCNW	ak	100	1 (.25)		-Arthur Faske
WDNC	ak	100	C (DE)	Durham, N. C.	-Durham Radio Corp.
WGAL WHBB	ak ak	100	(.25)	Lancaster, Pa.	—WGAL, Inc., 8 W. King St. —Selma Brdcstg. Co., Inc.
WHEF	ak	$\begin{array}{c} 100 \\ 100 \end{array}$	(.25)	Selma, Ala. Kosciusko, Miss.	-Attala Brdcstg. Corp.
WJBK	ak	100	(.25)	Detroit, Mich.	-Jas, F. Hopkins, Inc.
WKAT	Z	100	P	Miami Beach, Fla.	-A. Frank Katzentine
WKBB	âk	100	(.25)	E. Dubuque, Ill.	-Sanders Bros., Hotel Julian
WKBV	ak	100	(.25)	Richmond, Ind.	-Knox Radio Corp.
WKBZ	ak	100	(.25)	Muskegon, Mich.	-Karl L. Ashbacker
WKEU	ak	100	Ď	Griffin, Ga.	-Station WKEU
WMBQ	ak	100	1	Brooklyn, N. Y.	-Metropolitan Brdcstg. Corp.
WMEX	ak	100	(.25)	Boston, Mass.	-The Northern Corp.
WNBF	ak	100	Č(.25)	Binghamton, N. Y.	-Howitt-Wood Radio Co.
WNLC	ak	100	D	New London, Conn.	-Thames Brdcstg. Corp.
WOMI	z	100	Р	Owensboro, Ky.	Owensboro Brdcstg. Co.
WOPI	ak	100		Bristol, Tenn.	-Radiophone Station WOPI
WRDW		100	1.1.1	Augusta, Ga.	-Augusta Brdcstg. Co., Inc.
WRGA	ak	100	(.25)	Rome, Ga.	-Rome Brdcstg. Corp.
WRTD	z	100	BP	Richmond, Va.	-Times Dispatch Pub. Co.
WSYB	ak	100	( )=)	Rutland, Vt. E. St. Louis, Ill.	—Philip Weiss Music Co. —Miss. Valley Brdcstg. Co.
WTMV WWRL	ak ak	$\frac{100}{100}$	(.25)	Woodside, N. Y.	-Long Isl. Brdcstg. Co.
WWSW		100	(.25)	Pittsburgh, Pa.	-Walker & Downing Radio Corp.
	an	100	(-23)	incobulgit, i.a.	Walker & Downing Radio Gorp.
1510	1		/100		
1510	KC	ys.	(120	.0/	
		-			
CFRC	ak	100	F	Kingston, Ont.	-Queen's University
CKCR	ak	100	Sec. 2.	Waterloo, Ont.	-K. W. Brdcstg. Co.
1 500	4		1100	A) []	
1530	kc	vs.	(196	.0)	
		0	`		· · · · · · · · · · · · · · · · · · ·
КХВҮ	ak			Kansas City, Mo.	-First Natl. Television Inc.
WBRY	ak	1000	М	Waterbury, Conn.	-American Republican, Inc.
1550	ke	VS.	(193)	.4)	
1000	110	,	1-20		
КРМС	ak	1000	М	Bakersfield, Calif.	-Pioneer Mercantile Co.
WOXR				New York, N. Y.	-Interstate Brdcstg. Co.

#### NORTH AMERICAN B. C. STATIONS BY LOCATIONS

Frequency in kilocycles in second column. Night power in watts in third column. Net work affiliations in fourth column. C Columbia, R National Red, B National Blue, N National Red and Blue. F Canadian, M Mutual.

ALABAMA	Montgomery WSFA 1410 500 C	Ketchikan KGBU 900 500	Yuma KUMA 1420 100	
Birmingham WAPI 1140 5000 N WBRC 930 1000 C	Selma WHBB 1500 100°	ARIZONA	ARKANSAS	
WSGN 1310 100 B Decatur	Sheffield WMSD 1420 100	Jerome KCRJ 1310 100	Blytheville KLCN 1290 100	
WMFO 1370 100 Dothan WAGF 1370 250	Tuscaloosa WJRD 1200 100	Lowell KSUN 1200 100	El Dorado KELD 1370 100	
Gadsden WJBY 1210 100	ALASKA	Phoenix KOY 1390 1000 C KTAR 620 1000 N	Fort Smith KFPW 1210 100	
Huntsville WBHP 1200 100 Mobile	Anchorage KFQD 780 250 Juneau	Tucson KGAR 1370 100	Hot Springs KTHS 1060 10000 N Jonesboro	
WALA 1380 500 C	KINY 1310 100	KVOA 1260 1000	KBTM 1200 100	

Ł

ĵ

		1	
Little Rock	San Luis Obispo	FLORIDA	Nampa
KARK 890 500 B KGHI 1200 100	KVEC 1200 250	Clearwater	KFXD 1200 100
KLRA 1390 1000 C	Santa Ana KVOE 1500 100M	WFLA 620 1000 N	Pocatello KSEI 900 250
Pine Bluff	Santa Barbara	Daytona Beach	Twin Falls
KOTN 1500 100 Siloam Springs	KDB 1500 100M	WMFJ 1420 100	KTFI 1240 1000
KUOA 1260 2500	KTMS 1220 500	Gainesville WRUF 830 5000	ILLINOIS
CALIFORNIA	Santa Rosa KSRO 1310 250	Jacksonville	
CALIFORNIA	Stockton	WJAX 900 1000 N	Bloomington
Bakersfield	KGDM 1100 1000M	WMBR 1370 100 C	WJBC 1200 100
KERN 1370 100 B KPMC 1550 1000M	KWG 1200 100 N	Lakeland WLAK 1310 100	Carthage WCAZ 1070 100
Berkeley	Visalia KTKC 1190 250	Miami	Champaign
KRE 1370 100 Beverly Hills	Watsonville	WIOD 1300 1000 N	WDWS 1370 100
KMPC 710 500	KHUB 1310 250	WQAM 560 1000 C	Chicago WAAF 920 1000
Chico	COLORADO	Miami Beach WKAT 1500 100	WBBM 770 50000 C
KHSL 1260 250 El Centro		Orlando	WCBD 1080 5000
KXO 1500 100	Alamosa KGIW 1420 100	WDBO 580 1000 C	WCFL 970 5000 B WCRW 1210 100
Eureka KIEM 1450 500	Colorado Springs	Pensacola	WEDC 1210 100
Fresno	KVOR 1270 1000 C	WCOA 1340 500 C	WENR 870 50000 B WGES 1360 500
KMJ 580 1000 N 1310 100	Denver KFEL 920 500M	St. Augustine WFOY 1210 100	WGN 720 50000M
Glendale	KFEL 920 500M KLZ 560 1000 C	St. Petersburg	WJJD 1130 20000 WLS 870 50000 N
KIEV 850 250	KOA 830 50000 N	WSUN 620 1000 N	WMAO 670 50000 R
Hollywood KFWB 950 1000	KPOF 880 500 KVOD 920 500 B	Tallahassee WTAL 1310 100	WMBI 1080 5000 WSBC 1210 100
Long Beach	Durango	Tampa	
KFOX 1250 1000 KGER 1360 1000	KIUP 1370 100 Grand Junction	WDAE 1220 1000 C West Palm Beach	Cicero WHFC 1420 100
Los Angeles	KFXJ 1200 100	WJNO 1200 100 C	Decatur
KECA 1430 1000 B KEHE 780 1000	Greeley KFKA 880 500M	GEORGIA	WJBL 1200 100
KFAC 1300 1000	La Junta		East Dubuque WKBB 1500 100
KFI 640 50000 R KFSG 1120 500	KOKO 1370 100 Lamar	Albany WGPC 1420 100	East St. Louis
KFVD 1000 1000	KIDW 1420 100	Atlanta	WTMV 1500 100
KGFJ 1200 100 KHJ 900 1000M	Pueblo KGHF 1320 500 B	WATL 1370 100 WGST 890 1000 C	Harrisburg WEBO 1210 100
KMTR 570 1000	KGHF 1320 500 B Sterling	WSB 740 50000 N	WEBQ 1210 100 Joliet
KNX 1050 50000 C KRKD 1120 500	KGEK 1200 100	WTFI 1450 500	WCLS 1310 100
Merced	CONNECTICUT	Augusta WRDW 1500 100	Peoria WMBD 1440 500 C
KYOS 1040 250 Modesto		Columbus	Quincy 4
KTRB 740 250	Bridgeport WICC 600 500M	WRBL 1200 100 Griffin	WTAD 900 1000 Rockford
Monterrey KDON 1210 100M	Hartford	WKEU 1500 100	WROK 1410 500
KDON 1210 100M Oakland	WDRC 1330 1000 C WTIC 1040 50000 R	Macon WMAZ 1180 1000 C	Rock Island WHBF 1210 100
KLS 1280 250	WTHT 1200 100M	Rome	Springfield
KLX 880 1000 KROW 930 1000	New Britain WNBC 1380 250	WRGA 1500 100 Savannah	WCBS 1420 100 WTAX 1210 100
Pasadena	New Haven	WTOC 1260 1000 C	Tuscola
KPPC 1210 100 Redding	WELI 900 500 New London	Thomasville WPAX 1210 100	WD <b>Z 1020 250</b> Urbana
KVCV 1200 100	WNLC 1500 100	Waycross	WILL 580 1000
Sacramento KFBK 1490 5000 N	Waterbury WATR 1190 100	WAYX 1200 100	INDIANA
KROY 1210 100	WBRY 1530 1000M	HAWAII	
San Bernardino KFXM 1210 100M	DELAWARE	Hilo	Anderson WIIBU 1210 100
San Diego		KHBC 1400 250M	W1IBU 1210 100 Elkhart
KFSD 600 1000 B KGB 1330 1000M	Wilmington	Honolulu	WTRC 1310 100
KGB 1330 1000M San Francisco	WDEL 1120 250 R W1LM 1420 100	KGMB 1320 1000 C KGU 750 2500 N	Evansville WEAO 1370 100
KFRC 610 1000M			WGBF 630 500 B
KGGC 1420 100 KGO 790 7500 B	DISTRICT OF COLUMBIA	IDAHO	Fort Wayne WGL 1370 100
KJBS 1070 500		Boise	WOWO 1160 10000 B
KPO 680 50000 R KSFO 560 1000 C	Washington WJSV 1460 10000 C	KIDO 1350 1000 B Idaho Falls	Gary WIND 560 1000
KYA 1230 1000	WMAL 630 250 B	KID 1320 500	Hammond
San Jose KOW 1010 1000	WOL 1310 100M WRC 950 500R	Lewiston KRLC 1390 250	WHIP 1480 5000 WWAE 1200 100

	1	OKIII
Indian WFBM	apolis	<sup>3</sup>
WFBM WGVA	1050	1000 C
WIRE	1400	1000 1000 R
Munci	1400	TOOD R
Munci WLBC New A	1310	100
Now A	lbany	
New A WGRC	1370	250
Richm	ond	
Richm WKBV	1500	100
South	Bend	
South WFAM WSBT	1200	100
WSBT	1200 1360	500
Terre WBOW	Haute	e
WBOW	1310	100 B
West I	afaye	ette
WBAA	890	500
	OWA	
1	OWA	
A		
Ames WOI	640	5000
Boone	640	5000
KFGQ	1370	100
Cedar	Rapic	
Cedar WMT	600	1000 B
Daven WOC	port	
WOC	1370	100 C
Decora		
KGCA Kwlc	1270	100
KWLC	1270	100
Des M	loines	. 1
KRNT KSO	1320	1000 C
KSO	1430	500 B
WHO	1000	50000 R
Dubuq	ue	700
I ama (	1340	500
Iowa ( WSUI		500
WSUI Marsh: KFJB Mason KGLO Shenai KFNF KMA Siour	alltou	200
KEIB	1200	<sup>11</sup> 100
Mason	City	100
KGLO	1210	100 C
Shenai	ndoah	
KFNF	890	500
KMA	930	1000
	City	
KSCJ	1330	1000 C
••••	1420	100
KA	NSAS	s
A 6.11-		
Abilen KFBI Coffeyy	1050	5000
Coffey	1050 dllo	5000
	1010	1000
Dodge	1010 City	1000
KGNO	1340	250
Garder	1 City	/
Garder KIUL	1210	100
Great KVGB	Bend	
KVGB	1370	100
nutch	nson	
KWBG	1420 City	100
Kansas	City	
Lawrer	1310	100
VEVI	ice	1000
WREN	1220	1000 B
Manha	ttan	1000 B
KSAC	580	500
Pittsbu KOAM	704	1000
	170	1000
Salina KSAL	1500	100
NOAL .	1500	100
Topeka WIBW		1000 0 1
WIBW	58 <b>0</b>	1000 C

Wichi KANS KFH	ta 1210 1300	100 B 1000 C
	NTUC	
Ash 1-	- 4	
Ashla WCMI Corin	nd 1310	100
Covin WCK Y	1490	5000 B
Lexing WLAP		100
Louis <sup>,</sup> WAVE WHAS	940 820	1000 N 50000 C
Middl WLMU	esborc 1210	
Owen: WOMI	1500	100
Paduc WPAD	ah 1420	100
LO	UISIA	NA
Alexa	ndria	
Alexan KALB Baton	1210 Roug	100 }e
Baton WJBO Lafay KVOL Lake ( KPLC Monte	1420 <sup>°</sup> ette	100 B
KVOL Lake ( KPLC	1310 Charle 1500	100 s 100
Monro KMLB	лоо ре 1200	100
Monro KMLB New ( WBNO WDSU WJBW WSMB WSMB WWL Shrev	)rlean 1200	s 100
WDSU WJBW	1250 1200	1000 B 100
WWL Shreve	850 850	1000 N 10000 C
Shreve KRMD KTBS KWKH	1310 1450 1100	100 1000 N 10000 C
	IAINE	
Augus WRDO Bango WABI	1370 r	100M
WABI WLBZ	1200 620	100 500 C
WLBZ Portla WCSH WGAN Presqu WAGM	940 640	1000 R 500
Presqu WAGM	ie Isla 1420	100
	RYLA	
Baltin	логе	
WBAL	760	2500 B
WEAL WCAO WCBM WFBR Colled	1370 1270	500 C 100 500 R
Colleg W3XJ Cumb WTBO	e Par 1060	k 100
Cumb WTBO	erland 800	250
WTBO Freder WFMD Hagers WJEJ Salisb	900	500
VJEJ Salisbi	1210 ury	100
	1200	250

_		
MASS.	ACHU	SETTS
Bosto	n	
WAAB	1410	500M
Bosto WAAB WBZ	990	50000 B
WCOP	1120	500
WEEI	590	1000 C
WHDH WMEX WNAC WORL	830	1000
WMEX	1500	100
WORL	1230 920	1000 R
TUKL		500
Fall J	River	100034
WSAR	1450	1000M
Lawr	encevi	lle
	680	1000 10-100
		10-100
Lowe	1170	40.034
WLLH New	1370 Bedfor	_ 100M
WNBH	1310	100M
Pitts	field	100141
	1310	100
Sprin WBZA	gfield	
WBZA	990	1000 B
WMAS WSPR	1420	100 C
WSPR	1149	500M
Worc WORC WTAG	ester	
WORC	1280	500 C
WIAG	1280 580	1000 R
MI	CHIG	AN
	Sing	
Battle	e Cree	k
	1420	100
Bay (	City 1410	
WELL Bay ( WBCM Calur	1410	500
	net	
WHDF	1370	100
Detro	1500	100
WIR	750	50000 C
WJBK WJR WMBC	1420	100
WMBC WWJ WXYZ	1420 920	5000 R
WXYZ	1240	1000 B
Last.	Lansir	ig
	850	1000
WKAR Flint WFDF	1310	105
WFDF Grand WASH	1310	100
WASH	1 KAD	500 N
wood	d Rap 1270 1270	500 N 500 N
Ironw	boot	300 N
WJMS Jacks WIBM	1420	100
Jacks	on	
WIBM	1370	100
Kalar WKZO	nazoo	
WKZO	590	1000 B
Lansi	ng 1210	100
WJIM	1210	100
Lapee WMPC Marqu	1200	100
Maro	uette	100
		100
Musk	egon	
WKBZ	1500	100
Royal	Oak	
		50
Sagin WHAL	aw	500
** ALL	950	500
MIN	INIEGO	
MIN	INESC	IA
Alber	t Lea	
Alber KATE	1420	250
	h	200
KDAL	1500	100
KDAL WEBC	1290	1000 N

Fergu KGDE	s Fall	8
KGDE	1200	100
Hibbi WMFG	ng 1210	100
		100
WCCO WDGY WLB	eapolis 810	, 50000 C
WDGY	1180	1000
WLB WTCN	1250 1250	1000
WICN	1250	1000 B
Moorl KVOX North	1310	100
North	field	100
North WCAL	1250	1000
Roche	ster	
<b>KROU</b>	1310	100
St. Cl	oud	100
St Pe	1420	100
St. Pa KSTP WMIN	1460	10000 R
WMIN	1370	10000 R 100
Virgin WHLB	uia	
WHLB	1370	100
Winor KWNO	1200	100
R WINO	1200	100
MIS	SISSI	PPI
Grens WMFN	ıda (	
WMFN	1210	100
Gulfp WGCM	ort 1210	100
Hatti	esburg	
WEND	1270	100
Jacks	on	
Jacks WJDX	1270	1000 N
Kosci WHEF	usko 1500	100
Laure	1 1 1	100
WAML	1310	100
WAML Merid WCOC Vicket	lan	
wçoc	880	500 C
Vickst WQBC	1360	1000
	1000	1000
MI	SSOU	RI
	<u>.</u>	
Cape ( KFVS	Girard	eau 100
Colun KFRU	1210 1bia	100
KFRU	630	500
Jeffers	ion Ci	ty
KWOS	1310	100
Joplin WMBH	1430	100
Kanea		100
	- CALL	
KCMO	1370	100
KCMO KMBC	1370 950	100 1000 C
KCMO KMBC KXBY	1370 950 1530	100 1000 C 1000
WDAF	1370 950 1530 610	100 1000 C 1000 1000 R
WDAF WHB	1370 950 1530 610 860	100 1000 C 1000
WDAF WHB	1370 950 1530 610 860 seph	100 1000 C 1000 1000 R 1000M
WDAF WHB St. Jo	1370 950 1530 610 860 seph 680	100 1000 C 1000 1000 R
WDAF WHB St. Jo	1370 950 1530 610 860 seph 680 ouis	100 1000 C 1000 R 1000 R 1000M 2500
WDAF WHB St. Jo	1370 950 1530 610 860 seph 680 900 550 1090	100 1000 C 1000 R 1000 R 1000 M 2500
WDAF WHB St. Jo	1370 950 1530 610 860 seph 680 900 550 1090	100 1000 C 1000 R 1000 R 1000M 2500
WDAF WHB St. Jo	1370 950 1530 610 860 seph 680 901s 550 1090 550 1350	100 1000 C 1000 R 1000 R 1000 M 2500 5000 C 1000 R 1000 B
WDAF WHB St. Jo	1370 950 1530 610 860 seph 680 901s 550 1090 550 1350 760	100 1000 C 1000 R 1000 R 1000M 2500 5000 C 1000 C 1000 R 1000 B
WDAF WHB St. Jo KFEQ St. Lc KFUO KMOX KSD KWK WEW WIL	1370 950 1530 610 860 seph 680 buis 550 1090 550 1350 760 1200	100 1000 C 1000 R 1000 R 1000 M 2500 5000 C 1000 R 1000 B
WDAF WHB St. Jo KFEQ St. Lc KFUO KMOX KSD KWK WEW WIL	1370 950 1530 610 860 seph 680 buis 550 1090 550 1350 760 1200	100 1000 C 1000 R 1000 R 2500 5000 C 1000 C 1000 R 1000 B 1000 B 1000
WDAF WHB St. Jo KFEQ St. Lc KFUO KMOX KSD KWK WEW WIL	1370 950 1530 610 860 seph 680 buis 550 1090 550 1350 760 1200	100 1000 C 1000 R 1000 R 2500 50000 C 1000 C 1000 B 1000 B 1000 100
WDAF WHB St. Jo	1370 950 1530 610 860 seph 680 buis 550 1090 550 1350 760 1200	100 1000 C 1000 R 1000 R 2500 5000 C 1000 C 1000 R 1000 B 1000 B 1000
WDAF WHB St. Jo KFEQ St. Lc KFUO KMOX KSD KWK WEW WIL Spring KGBX KWTO	1370 950 1530 610 860 seph 680 90 1350 1090 550 1350 760 1200 field 1230 560	100 1000 C 1000 R 1000 R 1000 R 2500 5000 C 1000 R 1000 B 1000 B 1000 B 1000 B 1000
WDAF WHB St. Jo KFEQ St. Lo KFUO KMOX KSD KWK WEW WIL Spring KGBX KWTO MO	1370 950 1538 610 860 seph 680 suis 550 1090 550 1350 760 1200 \$field 1230 560	100 1000 C 1000 R 1000 R 1000 R 2500 5000 C 1000 R 1000 B 1000 B 1000 B 1000 B 1000
WDAF WHB St. Jo KFEQ St. Lo KFUO KMOX KSD KWK WEW WIL Spring KGBX KWTO MO	1370 950 1538 610 860 seph 680 suis 550 1090 550 1350 760 1200 \$field 1230 560	1000 C 1000 C 1000 R 2500 500 C 1000 R 1000 B 1000 B 1000 B 1000 B 1000 B 1000 C 1000 C 1000 C 1000 C
WDAF WHB St. Jo KFEQ St. Lc KFUO KMOX KSD KWK WEW WIL Spring KGBX KWTO	1370 950 1538 610 860 seph 680 suis 550 1090 550 1350 760 1200 \$field 1230 560	100 1000 C 1000 R 1000 R 1000 R 2500 5000 C 1000 R 1000 B 1000 B 1000 B 1000 B 1000

Butte	Carlsbad	Utica	Columbus WBNS 1430 500 C
KGIR 1340 1000 N	KLAH 1210 100	WIBX 1200 100 C	WCOL 1210 100 N
Great Falls	Clovis	Watertown	
KFBB 1280 1000 C	KICA 1370 100	WNNY 1420 100	WHKC 640 500
Helena		White Plains	WOSU 570 750
KPFA 1210 100	Gallup	WFAS 1210 100	Dayton
Kalispell	KAWM 1500 100	Woodside	WHIO 1260 1000 C
KGEZ 1310 100	Roswell KGFL 1370 100	WWRL 1500 100	WSMK 1380 200 C
Lewistown KDNC 1200 100	Santa Fe	NORTH CAROLINA	Lima WBLY 1210 100
Missoula	KRQA 1310 100	Asheville	Portsmouth
KGVO 1260 1000 C		WWNC 570 1000 N	WPAY 1370 100
Wolf Point	NEW YORK	Charlotte	Toledo
KGCX 1450 1000		WBT 1080 50000 C	WSPD 1340 1000 B
NEBRASKA	Albany WABY 1370 100	WSOC 1210 100 N	Youngstown
Clay Center	WOKO 1430 500 C	Durham WDNC 1500 100 C	WKBN 570 500 C Zanesville
KMMJ 740 1000	Auburn	Gastonia	WALR 1210 100
Kearney	WMBO 1310 100	WJBR 1420 100	
KGFW 1310 100	Binghamton	Greensboro	OKLAHOMA
Lincoln	WNBF 1500 100 C	WBIG 1440 1000 C	
KFAB 770 10000 C KFOR 1210 100 C	Brooklyn	High Point WMFR 1200 100	Ada
Norfolk	WBBC 1400 500 WBBR 1300 1000	Kinston	KADA 1200 100M Ardmore
WJAG 1060 1000 North Platte	WCNW 1500 100 WMBO 1500 100	Raleigh	KVSO 1210 100M
KGNF 1430 1000	WVFW 1400 500	WPTF 680 1000 N	Elk City
Omaha		Rocky Mount	KASA 1210 100M
KOIL 1260 1000 B	Buffalo	WEED 1420 100	Eniđ
	WBEN 900 1000 R	Wilmington	KCRC 1360 250M
WAAW 660 500 WOW 590 1000 R	WBNY 1370 100 WEBR 1310 100 B	WMFD 1370 100	Muskogee
Scottsbluff	WGR 550 1000 C	Wilson	KBIX 1500 100M
KGKY 1500 100	WKBW 1480 5000 C	WGTM 1310 100	Norman
NEVADA	WSVS 1370 50	Winston-Salem WAIR 1250 250	WNAD 1010 1000 Oklahoma City
	Canton WCAD 1220 500	WSJS 1310 100 C	KFXR 1310 100 KOMA 1480 5000 C
Reno	Elmira	NORTH DAKOTA	KTOK 1370 100M
KOH 1380 500 C	WESG 850 1000 C		WKY 900 1000 N
NEW HAMPSHIRE	Freeport WGBB 1210 100 Jamestown	Bismarck KFYR 550 1000 N	Okmulgee KHBG 1210 100
Laconia	WJTN 1210 100 B	Devils Lake	Ponca City
WLNH 1310 100M	Newburgh	KDLR 1210 100	WBBZ 1200 100M
Manchester	WGNY 1210 100	Fargo	Shawnee
WFEA 1340 500 B	New York	WDAY 940 1000 N	KGFF 1420 100M
Portsmouth	WABC 860 50000 C	Grand Forks	Tulsa
WHEB 740 250	WBIL 1100 5000	KFJM 1410 500	KTUL 1400 500 C
	WBNX 1350 1000 WBOO 860 50000	Jamestown KRMC 1370 100	KVOO 1140 25000 N
NEW JERSEY	WEAF 660 50000 R WEVD 1300 1000	Mandan KGCU 1240 250	OREGON
Asbury Park	WFAB 1300 1000	Minot	Astoria
WCAP 1280 500	WHN 1010 1000	KLPM 1240 250	KAST 1370 100
Atlantic City	WINS 1180 1000	Valley City	Corvallis
WPG 1100 5000 C		KOVC 1500 100	KOAC 550 1000
Bridgeton WSNJ 1210 100	WJZ 760 50000 B WMCA 570 1000		Eugene
Camden WCAM 1280 500	WNEW 1250 1000 WNYC 810 1000	ОНІО	Klamath Falls
Jersey City	WOV 1130 1000	Akron	KFJI 1210 100
WAAT 940 500	WOXR 1550 1000	WADC 1320 1000 C	La Grande
WHOM 1450 250	Olean	WJW 1210 100	KLBM 1420 100
Newark	WHDL 1400 250	Ashtabula	Marshfield
W1HBI 1250 1900	Plattsburg	WICA 940 250	KOOS 1200 100
WOR 710 50000M	WMFF 1310 100	Canton	Medford
Red Bank	Rochester WHAM 1150 50000 B	WHBC 1200 100	KMED 1410 250 Portland
WBRB 1210 100	WHEC 1430 500 C	Cincinnati	KALE 1300 500 C
Trenton	WSAY 1210 100	WCPO 1200 100	KBPS 1420 100
WTNJ 1280 500	Saranac Lake	WKRC 550 1000 C WLW 700 500000 N	KEX 1180 5000 B KGW 620 1000 R
Zarephath WAWZ 1350 500	WNBZ 1290 100 Schenectady	WSAI 1330 1000 R	KOIN 940 1000 C
NEW MEXICO	WGY 790 50000 R Syracuse	Cleveland	KWJJ 1040 500 KXL 1420 100
Albuquerque	WFBL 1360 1000 C	WGAR 1450 500 B	Roseburg
	WSYR 570 1000 B	WHK 1390 1000 C	KRNR 1500 100
KGGM 1230 1000	Troy	WJAY 610 500	Salem
KOB 1180 10000 B	WHAZ 1300 500	WTAM 1070 50000 R	KSLM 1370 100

82

ï

1	PENI	NSYLV	ANIA
_	Allor	town	
w	CRA	1440 1440 1440	500
w	SAN	1440	500 B
			000
wi	Altoc FBG	1310	100
	CDC	1310	100
11/1	Easte EST	on 1200	100
		1200	100
11/1	Erie LEU	1420	100 B
			100 D
	Glen IBG	side	
		970	100
11/1	Gree	nsburg 620	250 0
	-		250 C
	Grov	e City	
w	SAJ	1310	100
w	натт цр	e City 1310 isburg 1430 1200 eton 1420	500 C
w	K RO	1200	100
T i	Hazl	eton	100
w	AZL	1420	100
	John	stown 1310	
w,	JAC	1310	100
	Lanc	aster	
w	GAL	1500	100
K V	г нціг V W	1310 caster 1500 idelphi 1020 1170 1370 560 1310 610 920	a 10000 R 50000 C
ŵ	CAU	1170	50000 C
ŵ	DAS	1370	100
W	FIL	560	1000 B
W	нат	1310	100
W	IP	610	1000
W	PEN	920	
w	PEN RAX TEL	610 920 920 1310	1000
		1310	100
	PITTS	huroh	
KI	DKA	burgh	50000 B
KI K(	DKA DV	burgh	50000 B 500 C
KC	OV CAF	burgh 980 1380	1000 R
WO WO	OV CAE JAS	burgh 980 1380 1220 1290	1000 R 1000 C
WO WO	OV CAE JAS	burgh 980 1380 1220 1290	1000 R
WO WO	OV CAE JAS	burgh 980 1380 1220 1290	1000 R 1000 C 100
WO WO	OV CAE JAS	burgh 980 1380 1220 1290	1000 R 1000 C
WO WO	OV CAE JAS	burgh 980 1380 1220 1290	1000 R 1000 C 100 100 100
WO WO	OV CAE JAS	burgh 980 1380 1220 1290	1000 R 1000 C 100 1000 100 500
WO WO	OV CAE JAS	burgh 980 1380 1220 1290	1000 R 1000 C 100 100 100
WO WO	OV CAE JAS	burgh 980 1380 1220 1290	1000 R 1000 C 100 1000 1000 500 1000
	QV CAE JAS WSW Read EEU RAW Scrai GBI GBI QAN Sunt KOK	burgh 980 1380 1220 1290 7 1500 ling 830 7 1310 880 880 980 900 1210	1000 R 1000 C 100 100 100 500 1000 1000
	QV CAE JAS WSW Read EEU RAW Scrai GBI GBI QAN Sunt KOK	burgh 980 1380 1220 1290 7 1500 ling 830 7 1310 880 880 980 900 1210	1000 R 1000 C 100 100 100 500 1000 1000
	QV CAE JAS WSW Read EEU RAW Scrai GBI GBI QAN Sunt KOK	burgh 980 1380 1220 1290 7 1500 ling 830 7 1310 880 880 980 900 1210	1000 R 1000 C 100 100 100 500 1000 1000
	QV CAE JAS WSW Read EEU RAW Scrai GBI GBI QAN Sunt KOK	burgh 980 1380 1220 1290 7 1500 ling 830 7 1310 880 880 980 900 1210	1000 R 1000 C 100 100 100 500 1000 1000
KC WC WI WI WC WC WC WC WC WC WC WC WC WC WC WC WC	QV CAE JAS WSW Read EEU RAW Scrai GBI QAN Sunt KOK Unio MBS Wilk BAX BRE	burgh 980 1380 1220 1290 7 1500 7 1500 100 100 100 100 100 100 100	1000 R 1000 C 100 1000 1000 1000 1000 1000 250 re 100 100
KC WC WI WI WI WC WC WC WC WC WC WC WC	QV CAE JAS WSW Read EEU Scrai GBI QAN Sunt KOK Unio MBS Wilk BAX BRE Willi	burgh 980 1380 1220 1220 1220 1220 1220 830 4300 100 100 100 100 100 100 100	1000 R 1000 C 100 1000 1000 1000 1000 1000 250 re 100 100
KC WC WI WI WI WC WC WC WC WC WC WC WC	QV CAE JAS WSW Read EEU Scrai GBI QAN Sunt KOK Unio MBS Wilk BAX BRE Willi	burgh 980 1380 1220 1220 1220 1220 1220 830 4300 100 100 100 100 100 100 100	1000 R 1000 C 100 1000 1000 1000 1000 1000 250 re 100 100
KC WC WI WI WI WI WI WI WI WI WI WI	2V CAE JAS WSW WSad EEU RAW Scrai GBI QAN Sunt KOK Unio MBS Wilk BAX BRE Willi RAK York	burgh 980 1380 1220 1290 7 1500 7 1500 1500 1500 830 7 1310 nton 880 880 880 900 1210 1210 1210 1310 1370 5	1000 R 1000 C 100 1000 1000 1000 1000 1000 250 re 100 100
KC WC WI WI WI WI WI WI WI WI WI WI	QV CAE JAS WSW Read EEU Scrai GBI QAN Sunt KOK Unio MBS Wilk BAX BRE Willi	burgh 980 1380 1220 1290 7 1500 7 1500 1500 1500 830 7 1310 nton 880 880 880 900 1210 1210 1210 1310 1370 5	1000 R 1000 C 100 500 1000 1000 1000 1000 250 100 100 100 100
KC WC WI WI WI WI WI WI WI WI WI WI	OV CAE JAS MSWRead EEEU RAW Scrat GBI GBI Sount KOK Wilk BAX BRE Willi RAK YORK	burgh 980 1380 1290 1290 7 1500 1500 1310 nton 880 500 1310 1310 1310 1310 1320	1000 R 1000 C 100 500 1000 1000 1000 1000 250 100 100 100 100
	JV CAE JAS JAS WSW Read EEEU RAW SCraa GBI QAN SCA MBS Wilk BAZ BRE Will BAZ BRE Will RAK QORK PUE	burgh 980 1380 1290 1290 1500 ling 830 1310 1310 1310 1420 es-Bart 1210 1310 1310 1310 1310 1320	1000 R 1000 C 100 100 500 1000 100 250 250 100 100 100 100 100 B
	JV CAE JAS JAS WSW Read EEEU RAW SCraa GBI QAN SCA MBS Wilk BAZ BRE Will BAZ BRE Will RAK QORK PUE	burgh 980 1380 1290 1290 1500 ling 830 1310 1310 1310 1420 es-Bart 1210 1310 1310 1310 1310 1320	1000 R 1000 C 100 100 500 100 250 
KCWCWCWCWCWCWCWCWCWCWCWCWCWCWCWCWCWCWCW	JV CCAE LAS WSW Readd EEEU RAW RAW GBI QAN Sunth KOK WILL KOK WILL BAX BRE WILL WILL BAX York VOR K PUE May: PRA	burgh 980 1220 1220 1220 1290 1290 1300 1300 880 980 980 980 980 980 980 120 1310 1310 1320 RTO I 1320 1320	1000 R 1000 C 100 100 500 1000 100 250 250 100 100 100 100 100 B
KCWC WI WI WI WI WI WI WI WI WI WI WI WI	2V CAE LAS WSWReadd RAWSWGRAW GBI QOAN Sount KOK MBS Wilkk BAX Wilkk BAX Wilkk BAX Wilkk BAR Wilkk BAR Wilkk MBS POR POR PRA PORC	burgh 980 1220 1220 1220 1290 1290 1300 1300 880 980 980 980 980 980 980 120 1310 1310 1320 RTO I 1320 1320	1000 R 1000 C 100 100 100 100 100 100 100 100 100 10
WI W	2V CAE LAS WWSW Read EEEU Scrai GBI Sunt KOK KUnio Sunt KOK Sunt KOK Wilk BAX BRE Wilk BAX BRE PUE May: PPRA PPRA PPRA PPRA PPRA	burgh 980 1220 1220 1220 1290 1290 1290 1290 1290 1300 nton 880 880 880 880 1210 180 1210 1310 nton 1370 1320 RTO I auspoi 1370 1320 1370 1320 1370 1320 1370 1320 1370 1400 14	1000 R 1000 C 100 100 500 100 250 
WI W	2V CAE LAS WWSW Read EEEU Scrai GBI Sunt KOK KUnio Sunt KOK Sunt KOK Wilk BAX BRE Wilk BAX BRE PUE May: PPRA PPRA PPRA PPRA PPRA	burgh 980 1220 1220 1220 1290 1290 1290 1290 1290 1300 nton 880 880 880 880 1210 180 1210 1310 nton 1370 1320 RTO I auspoi 1370 1320 1370 1320 1370 1320 1370 1320 1370 1400 14	1000 R 1000 C 100 100 100 100 100 100 100 100 100 10
WI W	2V CAE LAS WWSW Read EEEU Scrai GBI Sunt KOK KUnio Sunt KOK Sunt KOK Wilk BAX BRE Wilk BAX BRE PUE May: PPRA PPRA PPRA PPRA PPRA	burgh 980 1220 1220 1220 1290 1290 1290 1290 1290 1300 nton 880 880 880 880 1210 180 1210 1310 nton 1370 1320 RTO I auspoi 1370 1320 1370 1320 1370 1320 1370 1320 1370 1400 14	1000 R 1000 C 100 100 500 100 250 100 250 100 100 100 RICO 100 100
KWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW	2V CAE 2 JAS WSWReadd EEU RAW Scraa GBI QAN MBSS GBI WILL BAX BAX BBRE PUE May: PRA PORP San KAQ NEL	burgh 980 1220 1220 1220 1290 1290 1290 1290 1290 1300 nton 880 880 880 900 1210 1310 nton 1370 120 1370 120 1370 120 1370 120 1370 120 120 1370 120 120 1270 120 1270 120 1270 120 1270 120 1270 120 1270 120 1270 120 1270 120 1270 120 120 120 120 120 120 120 12	1000 R 1000 C 100 100 500 100 250 250 250 100 100 100 B RICO 100 100 100 100
KWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW	2V CAE LAS WWSW Read EEEU Scrai GBI Sunt KOK KUnio Sunt KOK Sunt KOK Wilk BAX BRE Wilk BAX BRE PUE May: PPRA PPRA PPRA PPRA PPRA	burgh 980 1220 1220 1220 1290 1290 1290 1290 1290 1300 nton 880 880 880 900 1210 1310 nton 1370 120 1370 120 1370 120 1370 120 1370 120 120 1370 120 120 1270 120 1270 120 1270 120 1270 120 1270 120 1270 120 1270 120 1270 120 1270 120 120 120 120 120 120 120 12	1000 R 1000 C 100 100 500 100 250 
WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW	2V CAE JAS WSW SCAE EEU GBI GAN GBI GAN GGAN GGAN GGAN GGAN GGAN GGAN GGAN	burgh 980 1220 1220 1220 1290 1290 1290 1290 1290 1300 nton 880 880 880 880 1210 1310 nton 1370 1200 1370 1200 1370 1200 1370 1200 1370 1200 1370 1200 1370 1200 1370 1200 1370 1200 1270 1200 1270 1200 1270 1200 1270 1200 1270 1200 1270 1200 1270 1200 1270 1200 1270 1200 1270 1200 1270 1200 1270 1200	1000 R 1000 C 100 100 500 100 250 250 250 100 100 100 B RICO 100 100 100 100
WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW	2V CAE JAS WSW SCAE EEU GBI GAN GBI GAN GGAN GGAN GGAN GGAN GGAN GGAN GGAN	burgh 980 1220 1220 1220 1290 1290 1290 1290 1290 1300 nton 880 880 880 880 1210 1310 nton 1370 1200 1370 1200 1370 1200 1370 1200 1370 1200 1370 1200 1370 1200 1370 1200 1370 1200 1270 1200 1270 1200 1270 1200 1270 1200 1270 1200 1270 1200 1270 1200 1270 1200 1270 1200 1270 1200 1270 1200 1270 1200	1000 R 1000 C 100 100 100 100 100 100 100 100 100 10
WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW	2V CAE JAS WSW SCAE EEU GBI GAN GBI GAN GGAN GGAN GGAN GGAN GGAN GGAN GGAN	burgh 980 1220 1220 1220 1290 1290 1290 1290 1290 1300 nton 880 880 880 880 1210 1310 nton 1370 1200 1370 1200 1370 1200 1370 1200 1370 1200 1370 1200 1370 1200 1370 1200 1370 1200 1270 1200 1270 1200 1270 1200 1270 1200 1270 1200 1270 1200 1270 1200 1270 1200 1270 1200 1270 1200 1270 1200 1270 1200	1000 R 1000 C 100 100 100 100 100 100 100 100 100 10
WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW	2V CAE JAS WSW SCAE EEU GBI GAN GBI GAN GGAN GGAN GGAN GGAN GGAN GGAN GGAN	burgh 980 1220 1220 1220 1290 1290 1290 1290 1290 1300 nton 880 880 880 900 1210 1310 nton 1370 120 1370 120 1370 120 1370 120 1370 120 120 1370 120 120 1270 120 1270 120 1270 120 1270 120 1270 120 1270 120 1270 120 1270 120 1270 120 120 120 120 120 120 120 12	1000 R 1000 C 100 100 500 100 250 250 100 100 100 1000 B RICO 100 1000 1000 1000 1000 1000 1000

₽.,

SOUTH CAR	OLINA
Anderson WAIM 1290	100 C
Charleston WCSC 1360	500 N
Columbia	1000 N
Florence WOLS 1200	100
WFBC 1300	1000 N
Spartanburg WSPA 920	<sup>2</sup> 1000
SOUTH DAI	кота
Aberdeen	
KABR 1420 Brookings KFDY 780	100
KFDY 780 Huron	1000
Huron KGDY 1340 Pierre	250
Pierre KGFX 630 Rapid City	200
Rapid City KOBH 1370 WCAT 1200 Sioux Falls	100 100
Sioux Falls KELO 1200	100
KSOO 1110	2500 B
KUSD 890	500
Watertown KWTN 1210 Yankton	100
WNAX 570	1000 C
TENNESS	EE
Bristol	100
WOPI 1500 Chattanoog WAPO 1420 WDOD 1280	a 100
	100 1000 C
Jackson WTJS 1310	100
WTJS 1310 Knoxvifle WNOX 1010 WROL 1310 Memphis	1000 C
	100 B
WHBO 1370 WMC 780	100 1000 N
WNBR 1430 WREC 600	500 B 1000 C
Nashville WLAC 1470 WSIX 1210	5000 C
Nashville WLAC 1470 WSIX 1210 WSM 650	100 50900 N
TEXAS	;
Abilene	100
KRBC 1420 Amarillo KGNC 1410	100
Austin	1000 B
1130	100 C 1000
Beaumont KFDM 560	500 B
Big Spring KBST 1500	100
Brady KNEL 1500	250
College Sta	tion
WTAW 1120	500

mino		T DOG	
Corpu	s Chr	isti	Pri
Corpu KGFI KRIS		100 500 B	Pri- KEUI Sal KDY
Corsic KAND	1310	100	KDY KSL KUT
Dallas KRLD	1040	10000 C	
WFAA WRR	1280	50000 N 500M	Bu
Dubli KFPL	1310	100	Bur WCA Ru WSY
El Pa KROD KTSM	1500	100	St.
WDAH	$1310 \\ 1310$	100 100	WOD Spr
Fort V KFJZ	Worth 1370 1240	100	WNB Wa WDE
KFJZ KTAT WBAP	1240 800	1000M 50000 N	
Galves	1370	100	Ch
Green KGVL	ville 1200	100	Ch: WCH Dat WBT
Houst KPRC KTRH	9.20	1000 N	I Ha
KTRH KXYZ	1290 1440	1000 C 1000 B	WSV Lyi WLV
KTRH KXYZ Kilgot KOCA	re 1210	100	I Net
KFRO	1370	250	WGH Not WTA
Lubbo KFYO Lufki	1310	100	Pet WPH
Midla	1310	100	WBB
KRLH Palest	1420 tine	100	WME
KNET Pamp KPDN	1420	100	WRV
KPDN Paris KPLT		100	WDB
Pecos	1500	250	W.
KIUN Port A KPAC	1420 Arthu: 1260	100 r 500	Ab KXR
San A	1260 Angelo 1370	500 100	Bel KVOS Cer
San A	********	0 100	
KMAC KONO KTSA	1420 1370 1370 550	100 100	Eve KRK
	1190	1000 C 50000 N	
Shern KRRV Temp KTEM	nan 1310	250	RG1 Pul KWS Sea
Temp KTEM	le 1370	250	Sea KEEN KIRC
Texar KCMC Tyler KGKB	Kana 1420	100	KOL
KGKB Waco	1500	100	KOM KRSC KTW
Wesla	1420 co	100 C	KXA
KRGV Wichi	1260 ita Fal	1000 B	Spe KF10 KFP
KGKU	570	250 C	KFP KGA KHQ
	UTAH		Tac Tac KMO KVI
Cedar KSUB	1310	100	KMO
Ogdeı KLO	<sup>1</sup> 1400	500 B	Wa KUJ

			_
Price KEUB			
KEUB Salt L KDYL KSL KUTA	1420 ake C	100 itv	
KDYL	1 290	1000	R
KSL KUTA	1130 ± 1500	50000 100	С
	RMON		
		1	-
Burlin WCAX	gton 1200	100	
Rutlai	nd 1500	100	
St. Al WODM Spring	pans		
WODM Spring	1390 field	1000	
Spring WNBX Water WDEV	1260	1000	
WDEV	550	500	
VII	RGINI	A	-
Charle	ttesvi	lle	_
Charle WCHV Danvil WBTM	1420	100	
WBTM	1370	100	
Harris WSVA	onbur 550	g 500	
	burg 1200	100	
WBTM Harris WSVA Lynch WLVA Newpc WGH Norfol	rt Ne	ws	
Norfol WTAR	k		
WTAR Peters WPHR	780 burg	500	N
Peters WPHR Richm WBBL WMBG WRTD WRVA	880 10nd	500	
WBBL	1210 1210	100	n
WRTD	1500	100 100	В
- roano	we.	5000	С
WDBJ	930	1000	С
	HNG	ron	
Aberdo KXRO Belling KVOS	een		
KXRO Belling	1310 gham	100	
KVOS Centra	1200	100	
		500	
Everet KRKO Olymp KGY Pullm KWSC	1370	50	
Olymr KGY	oia 1210	100	
Pullm KWSC	an 1220	1000	
KWSC Seattl KEEN KIRO KJR	e	100	
KIRO	710	1000	
KJR Kol	970 1270	5000 1000	BC
KOL KOMO KRSC KTW	920 1120	1000 250	R
KTW	1370 710 970 1270 920 1120 1220 760	1000	
KXA Spoka	760 ne	250	
KFÍO KFPV	1120 890	100	С
Spoka KF1O KFPY KGA KHQ	1470 590	1000 5000	В
Tacon	131	1000	R
KMO KVI	1330 570	1000 1000	c
Walla	Walla	L	u
KÜJ	1370	100	

Wenatchee KPO 1500 100	Lethbridge	London	VOCM 1006 200
KPO 1500 100	CIOC 950 100 F	CFPL 730 100 F	VOGY 840 400
Yakima		North Bay CFCH 930 100 F	VONF 1195 500
KIT 1310 100	BRIT. COLUMBIA	Ottawa	
WEST VIRGINIA	Chilliwack CHWK 780 100 F	CRCO 880 1000 F	MEXICO
Bluefield WHIS 1410 500	Kamloops CFJC 880 100 F	Prescott CFLC 930 100	AGUASCALIENTES
Charleston	Kelowna CKOV 630 100 F	St. Catharines CKTB 1200 100 F	Aguascalientes XEBI 1000 25
WCHS 580 500 C Clarksburg	Prince Rupert CFPR 580 50	Sault Ste. Marie CJIC 1500 100	XEXC 810 350
WBLK 1370 100	Trail CJAT 910 1000 F	Stratford CJCS 1210 50	BAJA CALIFORNIA
Fairmont WMMN 890 500 C	Vancouver	Sudbury CKSO 780 1000 F	Agua Caliente
Huntington WSAZ 1190 1000	CKCD 1010 100	Timmins CKGB 1420 100 F	XEBC 730 5000 Mexicali
Parkersburg	CKFC 1410 50 CKMO 1410 100 F	Toronto	XEAA 920 200 XEAO 660 250
Wheeling	CKWX 1010 100 F CRCV 1100 5000 F	CFRB 690 10000 C CKCL 580 100 F	Rosarito
WWVA 1160 5000 C	Victoria CFCT 1450 50	CRCT 840 5000 N CRCY 1420 100 F	XEAQ 1090 1000 Tijuana
WISCONSIN		Waterloo CKCR 1510 100	XEAC 980 250
Eau Claire WEAU 1050 1000	MANITOBA	Windsor	XEBG 820 1000 XEC 1150 100
Fond du Lac	Brandon CKX 1120 100 F	CKLW 1030 5000M CRCW 600 500 F	XEMO 860 5000 XEOK 760 2500
KFIZ 1420 100 Green Bay	Winnipeg CJRC 630 500 F	Wingham CKNX 1200 50	CHIHUAHUA
WHBY 1200 100 WTAQ 1330 1000 C	CKY 910 15000 F	PRINCE EDWARD	Chihuahua
Janesville WCLO 1200 100	NEW BRUNSWICK	ISLAND	XEFI 1440 250 Juarez
LaCrosse WKBH 1380 1000 C	Fredericton CFNB 550 500 F	Charlottetown CFCY 630 1000 F	XEFV 1210 100 XEF 1450 100
Madison WHA 940 5000	Moncton CKCW 1370 100 F	CHCK 1310 50 Summerside	XEJ 1020 1000
WIBA 1280 1000 N Manitowoc	St. John	CHGS 1450 50 F	XEP 1160 500 Parral
WOMT 1210 100 Milwaukee		QUEBEC	XEAT 1210 250
WEMP 1310 100 WISN 1120 250 C	N. W. TERRITORY	Chicoutimi CRCS 950 100 F	COAHUILA
WTMJ 620 1000 N	Aklavik CJCU 1210 50	Hull	Piedras Negras
Poynette WIBU 1210 100	NOVA SCOTIA	CKCH 1210 100 F Montreal	XELO 1110 50000 XEPN 730 100000
Racine WRJN 1370 100	Glace Bay	CFCF 600 400 N CHLP 1120 100 F	Sabinas XEBX 640 250
Sheboygan WHBL 1300 250	VAS 685 2000 Halifax	CKAC 730 5000 C CRCM 910 5000 F	Saltillo XEAS 1160 50
Stevens Point WLBL 900 2500	CHNS 930 1000 F	New Carlisle CHNC 960 1000 F	XELA 1240 50 Torreon
Superior	Sydney CJCB 1240 1000 F	Quebec	XETB 1310 125
WDSM 1200 100 Wausau	Wolfville CKIC 1010 50	CHRC 580 100 CKCV 1310 100 F	Villa Acuna XERA 840 350000
WSAU 1370 100	Yarmouth CJLS 1310 100	CRCK 1050 1000 F	D. F.
WYOMING	ONTARIO	SASKATCHEWAN	Atzcapotzalco
Casper KDFN 1440 500	Brantford	Moose Jaw CHAB 1200 100 F	XEMG 1060 100 Gra. Anaya
Sheridan KWYO 1370 100	CKPC 930 100 F	Prince Albert CKBI 1210 100 F	XEDA 1220 200 Mexico City
	Chatham CFCO 630 100 F	Regina	XEAL 660 1000
CANADA	Cobalt CKMC 1210 50	CJRM 540 1000 CKCK 1010 500 F	XEB 1030 10000
ALBERTA	Fort William CKPR 730 100 F	Saskatoon CFQC 840 1000 F	XEBZ 1160 100 XECW 1310 10
Calgary CFAC 930 100 F	Hamilton	Yorkton CJGX 1390 100 F	XEDP 1080 500 XEFO 940 5000
CFCN 1030 10000	CHML 1010 100 F CKOC 1120 500 F	NEWFOUNDLAND	XEJP 1130 100 XEK 990 100
CJCJ 690 100 F Edmonton	Kingston CFRC 1510 100 F		XEL 780 1000
CFRN 960 100 F CJCA 730 1000 F	Kirkland Lake	St. John's VOAC 1065 40	XELZ 1370 100 XEMX 1280 100
CKUA 580 500	CJKL 1310 100 F	VOAS 940 100	XENC 860 50

			_							
XEW 890 5 XEYO 940	50000	SAN LU	UIS P	OTOSI	Y	UCATA	N	CMCD	950 810	250 600
	500	San L	uie Po	toni	Merio	10		CMCG	680	1000
Tacuba		XECZ	1370	100	XEBJ	1160	20	CMCJ	1100	
XEFA 1180	500	XEXH	1250	250	XEFC	550	100	CMCJ	850	500
		ALAN	1250	250						1444
DURANG	0	01	NALO		XEZ	630	500	CMCO	1200	250
DURANG	0	1 50	NALU	л	1 .			CMCQ	1410	250
D		Mazat	1.		(	CUBA		CMCU	1280	500
Durango	50							CMCW	750	150
XEE 1210	50	XEBL	1220	50	Caiba	rian		CMCX	570	150
	-				CMHD		250	CMCY	1030	5000
GUANAJUA	10	sc	NOR.	Δ	1	•	230	CMK	730	3000
					Cama			CMOA	1440	150
Leon		Hermo			CMJA	1010	300	CMOK	1260	150
XEKL 1240	500	XEBH	930	500	CMJC	1390	150	CMOX	1320	200
		Nogale			CMJE	1220	50	CMO	880	500
JALISCO	)	XEAF	990	750	CMJF	1150	200	СMŴ	600	1400
51101000					CMJK	780	250	CMX	920	1000
Guadalajara		TAM	AULI	PAS	CMJL	1340	75	Holgu	in	
XEAD 1060	125		_		CMJX	830	500	CMFK	1460	250
XED 1160	2500	Matan	noros		Carde			CMKO	1280	
	2500	XEAM	750	25	CMGE	1370	150		anillo	
Guzman		Nuevo	Lared	10	-			CMKM		200
XEBA 1080	20	XEBK	1000	100		de Av	ila	Mata		200
		XEFE	980	25	CMJĤ	1360	50	CMGC	1400	150
MICHOAC	AN	XENT		50000	CMJI	1130	150	CMGF	1120	150
		Revno			CMJO	1180	50	CMGH	790	500
Morelia		XEAW		50000	Cienf	110000		Moron		500
XEI 1370	125	Tampi			CMHJ	1160	175	CMJP	1430	75
			1310	250	СМНМ	1450	100	Pinar		
NUENO LE	0.N	XES	990	250	CMHW	829	100	CMAB	1340	NIO
NUEVO LE	ON	ABS	,,,,	2.50	CMHX	760	200	Sagua		
		VER	ACRU	17			200		1070	ranue 50
Monterrey	200				Сгисе			Sanct		
XEFB 870	200	Cordol	ba		СМНК	1330	250		1240	11US 50
XEFJ 1230	100	XEAG	1310	10	Havar	19		Santa		
XEH 720	250	Jalapa			CMBD	1170	500			
	5000	XEXB	1270	50	CMBG	1140	200	CMHI	1210	150
XEX 1310	125	XEXD	1340	350	CMBS	770	150	Santia		150
		Minati	itlan		CMBX	1070	500	CMKC	1250	150
PUEBLA			1150	20	CMBY	970	150	CMKD	1050	250
		Veracr			CMBZ	1000	500	CMKG	1160	
			1220	30	CMCA	1350	450	CMKR	1400	100
Puebla										
Puebla XETH 1210	100		1010	250	CMCB	640	150		1350 1190	

WWJ Detroit, Mich., owned by the Evening News Assn., has been granted special authorization to use 5 kw full time on 920 kcs. The license granted this station calls for 1 kw night and 5 kw days until local sunset.

When a nation-wide advertiser requested an option a few weeks ago on the first commercial television program to be broadcast by the NBC, the NBC turned down the application, pointing out that many similar requests had previously been received, and they were all considered simply as publicity stunts. A group of Italian stations are successfully overcoming the great nuisance of fading by synchronizing their broadcasts on the same frequency. Turin in the north and Trieste in the northeast of Italy are at present both broadcasting the same programs, and will shortly be joined by Genoa in the northwest. They all transmit on 1149 kcs.

The Australian Broadcasting Co. has purchased a number of the scripts of the "Death Valley" programs for broadcasting in Australia. It is reported also that some of the Death Valley stories will be used in the movies.

1

 $\leq_{2}$ 

CFAC 930 100		CJKL 1310 100 Kirkland Lake, Ont.	CMBD 1170 Havana, Cuba	500
 Calgary, Alta. CFCF 600 400		CJLS 1310 100	CMBG 1140	20
 Montreal, Que. CFCH 930 100		Yarmouth, N. S. CJOC 950 100	Havana, Cuba CMBS 770	15
 North Bay, Ont.		Lethbridge, Alta.	Havana, Cuba	
CFCN 1030 10000 Calgary, Alta.		CJOR 600 500 Vancouver, B. C.	CMBX 1070 Havana, Cuba	50
 CFCO 630 100		CJRC 630 500	CMBY 970	15
 Chatham, Ont. CFCT 1450 50		Winnipeg. Man. CJRM 540 1000	Havana, Cuba CMBZ 1000	50
 Victoria, B. C.		Regina, Sask.	Havana, Cuba	
<b>GFCY 630 1000</b> Charlottetown, P.E.I.		CKAC 730 5000 Montreal, Que.	CMCA 1350 Havana, Cuba	45
CFJC 880 100		CKBI 1210 100	CMCB 640 Havana, Cuba	15
 Kamloops, B. C. CFLC 930 100		Prince Albert, Sask, CKCD 1010 100	CMCD 950	25
 Prescott, Ont.		Vancouver, B. C.	Havana, Cuba	
CFNB 550 500 Fredericton, N. B.		CKCH 1210 100 Hull, Que.	CMCF 810 Havana, Cuba	60
 CFPL 730 100		CKCK 1010 500		,100
London, Ont. CFPR 580 50		Regina, Sask. CKCL 580 100	Havana, Cuba CMCJ 1100	50
 Prince Rupert, B. C.		Toronto, Ont.	Havana, Cuba	
CFQC 840 1000 Saskatoon, Sask.		CKCO 1010 100 Ottawa, Ont.	CMCN 850 Havana, Cuba	
CFRB 690 10000		CKCR 1510 100	CMCO 1200 Hayana, Cuba	25
 Toronto, Ont. CFRC 1510 160		Waterloo, Ont. CKCV 1310 100	CMCQ 1410	25
 Kingston, Ont.		Quebec, Que.	Havana, Cuba CMCU 1280	50
CFRN 960 100 Edmonton, Alta.		CKCW 1370 100 Moncton, N. B.	Havana, Cuba	51
 CHAB 1200 100		CKFC 1410 50	CMCW 750 Hayana, Cuba	1
 Moose Jaw, Sask. CHCK 1310 50		Vancouver, B. C. CKGB 1420 100	CMCX 570	1
 Charlottetown, P.E.I.		Timmins, Ont. CKIC 1010 50	Havana, Cuba	500
CHGS 1450 50 Summerside, P.E.I.		CKIC 1010 50 Wolfville, N. S.	CMCY 1030 Havana, Cuba	501
CHLP 1120 100		CKLW 1030 5000 Windsor, Ont.	CMGC 1400 Matanzas, Cuba	. <b>1</b> !
 Montreal, Que. CHML 1010 100		CKMC 1210 50	CMGE 1370	1
 Hamilton, Ont.		Cobalt, Ont. CKMO 1410 100	Cardenas, Cuba CMGF 1120	1
CHNC 960 1000 New Carlisle, Que.		Vancouver, B. C.	Matanzas, Cuba	1
CHNS 930 1000		CKNX 1200 50 Wingham, Ont.	CMGH 790 Matanzas, Cuba	5
 Halifax, N. S. CHRC 580 100		CKOC 1120 500	CMHA 1070	:
 Quebec, Que.		Hamilton, Ont. CKOV 630 100	Sagua la Grande, C	
CHSJ 1120 500 St. John, N. B.		Kelowna, B. C.	CMHB 1240 Sancti Spiritus, Cub	ba
 CHWK 780 100		CKPC 930 100 Brantford, Ont.	CMHD 1270	2
 Chilliwack, B. C. CJAT 910 1000		CKPR 730 100	Caibarlen, Cuba CMHI 1210	1
 Trail, B. C.		Fort William, Ont. CKSO 780 1000	Santa Clara, Cuba CMHJ 1160	1
CJCA 730 1000 Edmonton, Alta.		Sudbury, Ont.	Cienfuegos, Cuba	•
 CJCB, 1240 1000		CKTB 1200 100 St. Catharines, Ont.	CMHK 1330 Cruces, Cuba	2
 Sydney, N. S. CJCJ 690 100	-	CKUA 580 500	CMHM 1450	1
 Calgary, Alta.		Edmonton, Alta. CKWX 1010 100	Cienfuegos, Cuba CMHW 820	1
CJCS 1210 50 Stratford, Ont.		Vancouver, B. C.	Cienfuegos, Cuba	
 CJCU 1210 50		CKX 1120 100 Brandon, Man.	CMHX 760 Cienfuegos, Cuba	2
 Aklavik, N. W. T CJGX 1390 100		CKY 910 15000	CMJA 1010	3
 Yorkton, Sask.		Winnipeg, Man.	Camaguey, Cuba CMJC 1390	1
CJIC 1500 100 S. Ste, Marie, Ont.		CMAB 1340 Pinar del Rio, Cuba	Camaguey, Cuba	1
 1				

	CMJE 1220 50 Camaguey, Cuba		BR 1420 erdeen, S. Dak	100 ·		KEUB 1420 Price. Utah	10
	CMJF 1150 200	КА	DA 1200	100		KEX 1180	5080
	Camaguey, Cuba CMJH 1360 50		a, Okia. LB 1210	100		Portland, Ore. KFAB 770	10000
	Clego de Avila, Cuba	Ale	exandria, La.			Lincoln, Neb.	10000
	CMJI 1130 150 Ciego de Avila, Cuba		LE 1300 rtland, Ore,	500		KFAC 1300 Los Angeles, Calif.	100
_	CMJK 780 250		ND 1310	100		KFBB 1280	1000
	Camaguey, Cuba		rsicana, Texas		a	Great Falls, Mont.	
	CMJL 1340 75 Camaguey, Cuba		NS 1210 chita, Kans	100		KFBI 1050 Abilene, Kans.	5000
	CMJO 1180 50	KA	RK 890	500		KFBK 1490	5000
	Ciego de Avila, Cuba CMJP 1430 75		tle Rock, Ark. SA 1210	100		Sacramento, Calif. KFDM 560	500
	Camaguey, Cuba	Ell	City, Okla.			Beaumont, Texas	300
	CMJX 830 500 Camaguey Cuba		ST 1370 toria, Ore.	100		KFDY 780 Brookings, S. D.	1000
	CMK 730 3000		TE 1420	250		KFEL 920	500
	Havana, Cuba CMKC 1250 150		ert Lea, Minn.			Denver, Colo.	
	CMKC 1250 150 Santiago, Cuba		WM 1500	100		KFEQ 680 St. Joseph, Mo.	2500
	CMKD 1050 250	1	IX 1500	100		KFGQ 1370	100
	Santiago. Cuba CMKF 1460 250	KB	skogee. Okla. PS 1420	100		Boone, Iowa KFH 1300	1000
	Holguin, Cuba		tiand, Ore.			Wichita, Kans.	••••
	CMKG 1160 Santiago, Cuba	Big	ST 1500 Spring, Texas	100		KFI 640 Los Angeles, Calif.	50000
	CMKM 1120 200	КВ	TM 1200	100		KFIO 1120	100
	Manzanillo, Cuba CMKO 1280		iesboro, Ark. KN 1310	100		Spokane, Wash. KFIZ 1420	190
	Holguin, Cuba	Ка	nsas City, Kans	s		Fond du Lac, Wis.	
	CMKR 1400 100 Santiago, Cuba		MC 1420 Karkana, Texas	100	-	KFJB 1200 Marshalltown. Iowa	100
	CMKW 1350	кс	MO 1370	100		KFJI 1210	100
	Santiago, Cuba CMKX 1190		nsas City, Mo. RC 1360	250		Klamath Fails, Ore KFIM 1410	500
	Santiago, Cuba	En	id, Okla.			Grand Forks, N. D.	), <sup>1</sup>
4	ACMOA 1440 150 Havana, Cuba		RJ 1310 ome, Ariz.	100		KFJZ 1370 Fort Worth, Texas	100
24	CMOK 1260 150	KD	AL 1500	100		KFKA 880	500
	Havana, Cuba CMOX 1320 200		luth, Minn, B 1500	100 .		Greeley, Colo. KFKU 1220	1000
	Havana, Cuba		ita Barbara, C			Lawrence, Kans.	
	CMQ 880 500 Havana, Cuba		FN 1440 sper, Wyo.	508		KFNF 890 Shenandoah, Iowa	500
	CMW 600 1400	KD	KA 980	50000		KFOR 1210	100
	Havana, Cuba CMX 920 1000		tsburgh, Pa. LR 1210	100		Lincoln, Neb. KFOX 1250	1000
	Havana, Cuba	De	vils Lake, N. D			Long Beach, Calif.	1000
	CRCK 1050 1000 Quebec, Que.		NC 1200 vistown, Mont.	100		KFPL 1310 Dublin, Texas	100
	CRCM 910 5000	KD	ON 1210	100		KFPW 1210	100
	Montreal, Que. CRCO 880 1000		nterrey, Calif. YL 1290	1000		Fort Smith, Ark. KFPY 890	1000
	Ottawa, Ont.	Sal	t Lake City, Ut	ah		Spokane, Wash.	1000
	CRCS 950 100 Chicoutimi, Que.		CA 1430 Angeles, Calif	1000		KFQD 780 Anchorage, Alaska	250
	CRCT 840 5000	KE	EN 1370	100		KFRC 610	1000
	Toronto, Ont. CRCV 1100 5000		ttle. Wash.			San Francisco, Cali	
	Vancouver, B. C.		HE 780 Angeles, Calif	1000 I.		KFRO 1370 Longview, Texas	250
	CRCW 600 500 Windsor, Ont.	KE		100		KFRU 630	500
	CRCY 1420 100	KE		100		Columbia, Mo. KFSD 600	1000
	Toronto, Ont. KABC 1420 100		ux Falls, S. Da RN 1370	.k. 100		San Diego, Cailf. KFSG 1120	500
	San Antonio, Texas		RN 1370 kersfieid, Calif.	100		Los Angeles, Calif.	500
					1		
				3			
		L					

	KFUO 550 500		KGHI 1200 100		KIUL 1210 10
	St. Louis, Mo.		Little Rock, Ark.		Garden City, Kans.
	KFVD 1000 1000 Los Angeles, Calif.		KGHL 780 1000 Billings, Mont.		KIUN 1420 10 Pecos, Texas
	KFVS 1210 100		KGIR 1340 1000		KIUP 1370 10
	Cape Girardeau, Mo.		Butte, Mont.		Durango, Colo.
	KFWB 950 1000 Hollywood, Calif.		KGIW 1420 100 Alamosa, Colo.	1	KJBS 1070 50 San Francisco, Calif.
	KFXD 1200 100		KGKB 1500 100		KJR 970 500
	Nampa, Idaho KFXJ 1200 100		Tyler, Texas KGKL 1370 100		Seattle, Wash. KLAH 1210 10
	Grand Junction, Colo.		San Angelo, Texas		Carlsbad, N. Mex.
	KFXM 1210 100		KGKO 570 250		KLBM 1420 10
	San Bernardino, Calif. KFXR 1310 100		Wichita Falls, Texas KGKY 1500 100		La Grande, Ore. KLCN 1290 10
	Oklahoma City, Okla.		Scottsbluff, Neb.		Blytheville, Ark.
	KFYO 1310 100 Lubbock, Texas		KGLO 1210 100 Mason City, Iowa		KLO 1400 50 Ogden, Utah
	KFYR 550 1000		KGMB 1320 1000		KLPM 1240 25
	Bismarck, N. D.		Honolulu, T. H.		Minot, N. D.
	KGA 1470 5000 Spokane, Wash.		KGNC 1410 1000 Amarillo, Texas		KLRA 1390 100 Little Rock, Ark.
	KGAR 1370 100		KGNF 1430 1000		KLS 1280 25
	Tucson, Ariz. KGB 1330 1000		North Platte, Neb. KGNO 1340 250		Oakland, Calif. KLUF 1370 10
	KGB 1330 1000 San Diego, Calif.		Dodge City, Kans.		Galveston, Texas
	KGBU 900 500		KGO 790 7500		KLX 880 100 Oakland, Calif.
	Ketchikan, Alaska KGBX 1230 500		San Francisco, Calif. KGU 750 2500		KLZ 560 100
	Springfield, Mo.		Honolulu, T. H.		Denver, Colo.
	KGCA 1270 100		KGVL 1200 100 Greenville, Texas		KMA 930 100 Shenandoah, Iowa
	Decorah, Iowa KGCU 1240 250		KGVO 1260 1000		KMAC 1370 10
	Mandan, N. D.		Missoula, Mont.	-	San Antonio, Texas
	KGCX 1450 1000 Wolf Point, Mont.		KGW 620 1000 Portland, Ore.		KMBC 950 100 Kansas City, Mo.
	KGDE 1200 100		KGY 1210 100		KMED 1410 25
-	Fergus Falls, Minn. KGDM 1100 1000	1	Olympia, Wash. KHBC 1400 250		Medford, Ore. KMJ 580 100
	Stockton, Calif.		Hilo, T. H.		Fresno, Calif.
	KGDY 1340 250		KHBG 1210 100		KMLB 1200 10
	Huron, S. D. KGEK 1200 100		Okmulgee, Okla. KHJ 900 1000		Monroe, La KMMJ 740 100
	Sterling, Colo.		Los Angeles, Calif.		Clay Center, Neb.
	KGER 1360 1000 Long Beach, Calif.		KHQ 590 1000 Spokane, Wash.		KMO 1330 100 Tacoma, Wash.
	KGEZ 1310 100		KHSL 1260 250		KMOX 1090 5000
	Kalispell, Mont.		Chico, Calif.		St. Louis, Mo.
	KGFF 1420 100 Shawnee, Okla.	1	KHUB 1310 250 Watsonville, Calif.		KMPC 710 50 Beverly Hills, Calif.
	KGFI 1500 100		KICA 1370 100		KMTR 570 100
	Corpus Christi, Tex. KGFJ 1200 100		Clovis, N. M. KID 1320 500		Los Angeles, Calif. KNEL 1500 25
1 20-	Los Angeles, Calif.		Idaho Falis, Idaho		Brady, Texas
	KGFL 1379 100 Roswell, N. M.		KIDO 1350 1000 Boise, Idaho		KNET 1420 10 Palestine, Texas
	KGFW 1310 100		KIDW 1420 100		KNOW 1500 10
	Kearney, Neb.		Lamar, Colo.		Austin, Texas
	KGFX 630 200 Pierre, S. D.		KIEM 1450 500 Eureka, Callf.		KNX 1050 5000 Los Angeles, Calif.
	KGGC 1420 100		KIEV 850 250		KOA 830 5000
	San Francisco, Calif. KGGF 1010 1000		Glendale, Calif. KINY 1310 100		Denver, Colo. KOAC 550 100
	Coffeyville, Kans.		Juneau, Alaska		Corvallis, Ore.
	KGGM 1230 1000	100 C	KIRO 710 1000		KOAM 790 100
	Albuquerque, N. M. KGHF 1320 500		Seattle, Wash. KIT 1310 100	-	Pittsburg, Kans. KOB 1180 1000
	Pueblo, Colo.		Yakima, Wash.		Albuquerque, N. M.
				1	

KOBH 1370 100 Rapid City, S. Dak.	KRLC         1390         250         KTKC         1190         250           Lewiston, Idaho         Visalia, Calif.
KOCA 1210 100 Kilgore, Texas	KRLD 1040 10000 KTMS 1220 50 Dallas, Texas Santa Barbara, Calif.
KOH 1380 500	KRLH 1420 100 KTOK 1370 10
Reno, Nev	Midland, Texas Oklahoma City, Okla. KRMC 1370 100 KTRB 740 250
Omaha, Neb.	Jamestown, N. Dak. Modesto, Calif.
KOIN 940 1000 Portland, Ore.	KRMD         1310         100         KTRH         1290         1000           Shreveport, La.         Houston, Texas         Houston, Texas </td
KOKO 1370 100	KRNR 1500 100 KTSA 550 100
La Junta, Colo.	Roseburg, Ore.         San Antonio, Texas           KRNT         1320         1000         KTSM         1310         100
Seattle, Wash.	Des Moines, Iowa El Paso, Texas
KOMA 1480 5000 Oklahoma City, Okla.	KROC         1310         100         KTUL         1400         500           Rochester, Minn.         Tuisa, Okia.         Tuisa.
KOMO 920 1000	KROD 1500 100 KTW 1220 1000
KONO 1370 100	El Paso, Texas Seattle, Wash. KROW 930 1000 KUJ 1370 160
San Antonio, Texas	Oakland, Calif. Walla Walla, Wash.
KOOS 1200 100 Marshfield, Ore.	KROY 1210 100 KUMA 1420 100 Sacramento, Calif. Yuma, Ariz.
KORE 1420 100	KRQA 1310 100 KUDA 1260 2500
Eugene, Ore. KOTN 1500 100	Santa Fe, N. Mex. Siloam Springs, Ark. KRRV 1310 250 KUSD 890 500
Pine Bluff, Ark,	Sherman, Texas Vermillion, S. Dak.
KOVC 1500 100 Valley City, N. Dak.	KRSC         1120         250         KUTA         1500         100           Seattle, Wash.         Sait Lake City, Utah         Sait Lake City, Ut
KOY 1390 1000	KSAC 580 500 KVCV 1200 100
Phoenix, Ariz. KPAC 1260 500	Manhattan, Kans. Redding, Calif. KSAL 1500 100 KVEC 1200 250
Port Arthur, Texas	Salina, Kans. San Luis Obispo, Cal.
KPDN 1310 100 Pampa, Texas	KSCJ 1330 1000 KVGB 1370 109 Sioux Clty, Iowa Great Bend, Kans.
KPFA 1210 100	KSD 550 1000 KVI 570 1000
Helena, Mont. KPLC 1500 100	St. Louis, Mo. Tacoma, Wash. KSEI 900 250 KVOA 1260 1000
Lake Charles, La.	Pocatello, Idaho Tucson, Ariz.
KPLT 1500 100 Paris, Texas	KSFO         560         1000         KVOD         520         500           San Francisco, Calif.         Denver, Colo.         Denver,
KPMC 1550 1000	KSL 1130 50000 KVOE 1500 100
Bakersfield, Calif.	Salt Lake City, Utah Santa Ana, Calif. KSLM 1370 100 KVOL 1310 100
San Francisco, Calif.	Salem, Ore. Lafayette, La.
KPOF 880 500 Denver, Colo.	KSO         1430         500         KVOO         1140         25000           Des Moines, Iowa         Tuisa, Okia.         Tuisa, Ok
KPPC 1210 100	KSOD 1110 2500 KVOR 1270 1009
Pasadena, Calif. KPO 1500 100	Sioux Falls, S. Dak Colorado Springs, Colo. KSRD 1310 250 KVOS 1200 100
Wenatchee, Wash.	Santa Rosa, Calif. Bellingham, Wash.
KPRC 920 1000 Houston, Texas	KSTP         1460         10000         KVOX         1319         100           St. Paul, Minn,
KQV 1380 500	KSUB 1310 100 KVSO 1210 100
Pittsburgh, Pa. KQW 1010 1000	Cedar City, Utah Ardmore, Okla. KSUN 1200 100 KWBG 1420 100
San Jose, Catif.	Lowell, Ariz. Hutchinson, Kans.
KRBC 1420 100 Abilene, Texas	KTAR         620         1000         KWG         1200         109           Phoenix, Ariz.         Stockton, Calif.         Stockto
KRE 1370 100	KTAT 1240 1000 KWJJ 1046 500
Berkeley, Calif. KRGV 1260 1000	Fort Worth, Texas Portland, Ore. KTBS 1450 1000 KWK 1350 1000
Weslaco, Texas	Shreveport, La. St. Louis, Mo.
KRIS 1330 590 Corpus Christi, Tex.	KTEM         1370         250         KWKH         1100         10000           Temple, Texas         Shreveport, La.         Shreveport, Sh
KRKD 1120 500	KTFI 1240 1000 KWLC 1270 100
Los Angeles, Calif. KRKO 1370 50	Twin Falls, Idaho Decorah, Jowa KTHS 1060 10000 KWNO 1200 100
Everett, Wash.	Hot Springs, Ark. Winona, Minn.

	KWOS 1310 100	1	WALA 1380 500		WBNY 1370 100
	Jefferson City, Mo.		Mobile, Ala.		Buffalo, N. Y. WBOQ 860 50000
1	KWSC 1220 1000 Pullman, Wash.		WALR 1210 100 Zanesville, Ohio		New York, N. Y.
	KWTN 1210 100		WAML 1310 100		WBOW 1310 100
	Watertown, S. Dak. KWTO 560 5000		Laurel, Miss. WAPI 1140 5000	-	Terre Haute, Ind. WBRB 1210 100
	Springfield, Mo.		Birmingham, Ala.		Red Bank, N. J.
	<b>KWYO 1370 100</b> Sheridan, Wyo.		WAPO 1420 100 Chattanooga, Tenn.		WBRC 930 1000 Birmingham, Ala.
	KXA 760 250		WARD 1400 500		WBRE 1310 100
	Seattle, Wash.		Brooklyn, N. Y. WASH 1270 500		Wilkes-Barre, Pa. WBRY 1530 1000
	KXBY 1530 1000 Kansas City, Mo.		WASH 1270 500 Grand Rapids, Mich.		Waterbury, Conn.
	KXL 1420 100		WATL 1370 100		WBT 1080 50000 Charlotte, N. C.
	Portland, Ore. KXO 1500 100		Atlanta, Ga. WATR 1190 100		WBTM 1370 100
	El Centro, Calif.		Waterbury, Conn.		Danvitle, Va. WBZ 990 50000
_	KXRO 1310 100 Aberdeen, Wash.	- · · ·	WAVE 940 1000 Louisville, Ky.		Boston, Mass.
	KXYZ 1440 1000		WAWZ 1350 500		WBZA 990 1000
	Houston, Texas KYA 1230 1000		Zarephath, N. J. WAYX 1200 100	-	Springfield, Mass. WCAD 1220 500
	San Francisco, Calif.		Waycross, Ga.		Canton, N. Y.
	KYOS 1040 250		WAZL 1420 100		WCAE 1220 1000 Pittsburgh, Pa.
	Merced, Calif. KYW 1020 10000		Hazleton, Pa. WBAA 890 500		WCAL 1250 1000
	Philadelphia, Pa.		West Lafayette, Ind. WRAL 760 2500		Northfield, Minn. WCAM 1280 500
	VAS 685 2000 Glace Bay, N. S.		WBAL 760 2500 Baltimore, Md.		Camden, N. J.
	VOAC 1065 40		WBAL 1060 10000		WCAO 600 500 Baltimore, Md.
	St. John's, Nfld. VOAS 940 100		Baltimore, Md. WBAP 800 50000	L Setting of	WCAP 1280 500
	St. John's, Nfld.		Fort Worth, Texas		Asbury Park, N. J. WCAT 1200 100
	VOCM 1006 200 St. John's, Nfld.		WBAX 1210 100 Wilkes-Barre, Pa.		WCAT 1200 100 Rapid City, S. Dak.
	VOGY 840 400	1.	WBBC 1400 500		WCAU 1170 50000
	St. John's, Nfid.		Brooklyn, N. Y. WBBL 1210 100		Philadelphia, Pa. WCAX 1200 100
	VONF 1195 500 St. John's, Mild.	A	Richmond, Va.		Burlington, Vt.
	VOWR 681 500 St. John's, Nfld.		WBBM 770 50000 Chicago, Ill.		Carthage, Ill.
	WAAB 1410 500		WBBR + 1300 1000		WCBA 1440 500
	Boston, Mass. WAAF ( 920 1000		Brooklyn, N. Y. WBBZ 1200 100		Allentown, Pa. WCBD 1080 5000
	WAAF CO 920 1000 Chicago II.		Ponca City, Okla.		Chicago, Ill.
	WAAT 940 500		WBCM 1410 500 Bay City, Mich.		WCBM 1370 100 Baltimore, Md.
	Jersey City, N. J. WAAW 660 500		WBEN 900 1000		WCBS 1420 100
	Omaha, Neb.		Buffalo, N. Y.		Springfield, Ill. WCCO 810 50000
	WABC 860 50000 New York, N. Y.		WBEO 1310 100 Marquette, Mich.		Minneapolis, Minn.
	WABI 1200 100		WBHP 1200 100		WCFL 970 5000
	Bangor, Maine WABY 1370 100		Huntsville, Ala. WBIG 1440 1000	-	Chicago, Ill. WCHS 580 500
	Albany, N. Y.		Greensboro, N. C.		Charleston, W. Va.
	WACO 1420 100 Waco, Texas		WBIL 1100 5000 New York, N. Y.		WCHV 1420 100 Charlottesville, Va.
	WADC 1320 1000		WBLK 1370 100		WCKY 1490 500
	Akron, Ohio WAGE 1370 250		Clarksburg, W. Va.		Covington, Ky. WCLO 1200 10
	WAGF 1370 250 Dothan, Ala.		WBLY 1210 100 Lima, Ohio	-	Janesville, Wis.
	WAGM 1420 100		WBNO 1200 100		WCLS 1310 10 Joliet, Ill.
	Presque Isle, Me. WAIM 1200 100		New Orleans La. WBNS 1430 500		WCMI 1310 10
	Anderson, S. C.		Columbus, Ohio		Ashland, Ky. WCNW 1500 10
	WAIR 1250 250 Winston-Salem, N. C.		WBNX 1350 1000 New York, N. Y.		Brooklyn, N. Y.
		-	1		
L	-		-		-

	WCOA 1340 50 Pensacola, Fla.	10	WEEU 830 Reading, Pa.	1000	WGCM 1210	
<u> </u>			WELI 900	500	Gulfport, Miss. WGES 1360	
	Meridian, Miss.		New Haven, Conn.		Chicago, III.	
'	Columbus, Ohio		Battle Creek, Mich	100	WGH 1310	_
	WCOP 1120 50	o ——	WEMP 1310	100	Newport News, Va WGL 1370	a.
	Boston, Mass. WCPO 1200 10	<u> </u>	Milwaukee, Wis. WENR 870		Fort Wayne, Ind.	
_	Cincinnati, Ohio	•	Chicago, Ill.	50000	WGN 720 Chicago, Ill.	50
-	WCRW 1210 10	0	WEOA 1370	100	WGNY 1210	
·	Chicago, Ill. WCSC 1360 50	₀ <u> </u>	Evansville, Ind. WESG 850	1000	Newburgh, N. Y.	
	Charleston, S. C.		Elmira, N. Y.	1000	WGPC 1420 Albany, Ga.	
	WCSH 940 100 Portland, Me.	0	WEST 1200 Easton, Pa.	100	WGR 550	1
	WDAE 1220 100	o	WEVD 1300	1000	Buffalo, N. Y. WGRC 1370	
	_ Tampa, Fla. WDAF 610 100	.	New York, N. Y.		New Albany, Ind.	
	WDAF 610 100 Kansas City, Mo.		WEW 760 St. Louis, Mo.	1000	WGST 890 Atlanta, Ga.	1
	WDAH 1310 10	0	WEXL 1310	50	WGTM 1310	
	El Paso, Texas WDAS 1370 10	, <u> </u>	Royal Oak, Mich. WFAA 800 5	50000	Wilson, N. C.	
	Philadelphia, Pa.		Dallas, Texas		WGVA 1050 Indianapolis, Ind.	1
	WDAY 940 100 Fargo, N. Dak.	) . [	WFAB 1300 New York, N. Y.	1000	WGY 790	50
	WDBJ 930 100	,	WFAM 1200	100	Schenectady, N. Y WHA 940	5(
	Roanoke, Va.		South Bend, Ind.		Madison, Wis.	3
	WDBO 580 1000 Orlando, Fla.		WFAS 1210 White Plains, N. Y.	100	WHAL 950 Saginaw, Mich.	:
	WDEL 1120 250	, . <u></u>	WFBC 1300	1000	WHAM 1150	500
	Wilmington, Del. WDEV 550 500		Greenville, S. C. WFBG 1310	100	Rochester, N. Y. WHAS 820	500
	Waterbury, Vt.		Altoona, Pa.		Louisville, Ky.	500
	Minneapolis, Minn.		WFBL 1360 Syracuse, N. Y.	1000	WHAT 1310 Philadelphia, Pa.	1
	WDNC 1500 100		WFBM 1230	1000	WHAZ 1300	5
	Durham, N. C. WDOD 1280 1000	.	Indianapolis, Ind. WFBR 1270	500	Troy, N. Y.	
	Chattanooga, Tenn.		Baltimore, Md.	300	WHB 860 Kansas City, Mo.	10
	WDRC 1330 1000 Hartford, Conn.		WFDF 1310 Flint, Mich.	100	WHBB 1500	1
	WDSM 1200 100		WFEA 1340	500	Seima, Ala. WHBC 1280	1
	Superior, Wis. WDSU 1250 1000		Manchester, N. H. WFIL 560	1000	Canton, Ohio WHBF 1210	
	New Orleans, La.		Philadelphia, Pa.	1000	WHBF 1210 Rock Island, Ill,	1
	WDWS 1370 100 Champaign, Ill.		WFLA 620 : Clearwater, Fla.	1000	WHBI 1250	10
	WDZ 1020 250		WFMD 900	500	Newark, N. J. WHBL 1300	2
	Tuscola, Ill. WEAF 660 50000		Frederick, Md. WFOR 1370	100	Sheboygan, Wis.	
	WEAF 660 50000 New York, N. Y.		Hattlesburg, Miss.	100	WHBQ 1370 Memphis, Tenn.	1
	WEAN 780 1000 Providence, R. I.		WFOY 1210	100	WHBU 1210	1
	WEAU 1050 1000		St. Augustine, Fla. WFTC 1200	100	Anderson, Ind. WHBY 1200	1
	Eau Claire, Wis. WEBC 1290 1000		Kinston, N. C. WGAL 1500		Green Bay, Wis.	-
	WEBC 1290 1000 Duluth, Minn.	1	WGAL 1500 Lancaster, Pa.	100	WHDF 1370 Calumet, Mich.	1
	WEBQ 1210 100 Harrisburg, Ill.		WGAN 640	500	WHDH 830	10
	WEBR 1310 100		Portland, Me. WGAR 1450	500	Boston, Mass. WHDL 1400	2
	Buffalo, N. Y.		Cleveland, Ohio		Olean, N. Y.	
	WEDC 1210 100 Chicago, Ill,		WGBB 1210 Freeport, N. Y.	100	WHEB 740 Portsmouth, N. H.	2
	WEED 1420 100	1.	WGBF 630	500	WHEC 1430	5
	Rocky Mount, N. C. WEEI 590 1000	1.	Evansville, Ind. WGB1 880	500	Rochester, N. Y.	
	Boston, Mass.		Scranton, Pa.		WHEF 1500 Kosciusko, Miss.	10
			1			
			J			

ii ie

WHFC 1420 Dicero, III.	100	WJAX 900 Jacksonville, Fla	1000		WKY 900 1000 Oklahoma City, Okla.
 NHIO 1260	1000	WJAY 610	500		WKZO 590 1000
Dayton, Ohio		Cleveland, Ohio			Kalamazoo, Mich. WLAC 1470 5000
WHIP 1480 Tammond, Ind.	5000	Bloomington, Ill.	100		Nashville, Tenn.
WHIS 1410	500	WJBK 1500	100		WLAK 1310 100
Bluefield, W. Va.		Detroit, Mich.	100		Lakeland, Fla. WLAP 1420 100
WHJB 620 Greensburg, Pa.	250	Decatur, Ill.	100		Lexington, Ky.
 WHK 1390	1000	WJBO 1420	100		WLB 1250 1000
Cleveland, Ohio		Baton Rouge, La WJBR 1420	. 100		Minneapolis, Minn. WLBC 1310 100
WHKC 640 Columbus, Ohio	500	WJBR 1420 Gastonia, N. C.	100		Muncie, Ind.
WHLB 1370	100	WJBW 1200	100		WLBL 900 2500
Virginia, Minn. WHN 1010	1000	New Orleans, La WJBY 1210	. 100	<b>├</b> ──┤	Stevens Point, Wis. WLBZ \$20 500
New York, N. Y.	1000	Gadsden, Ala.	100		Bangor, Me.
	50000	WJDX 1270	1000		WLEU 1420 100 Erie, Pa.
Des Moines, Iowa WHOM 1450	250	Jackson, Miss. WJEJ 1210	100		WLLH 1370 100
Jersey City, N. J.		Hagerstown, Md			Lowell, Mass.
WHP 1430 Harrisburg, Pa.	500	Lansing, Mich.	100		WLMU 1210 100 Middlesboro, Ky.
WIBA 1280	1000	WJJD 1130	20000		WLNH 1310 100
 Madison, Wis.		Chicago, Ill.			Laconia, N. H.
WIBG 970	190	WJMS 1420 Ironwood, Mich.	100		WLS 870 50000 Chicago, Ill.
Glenside, Pa. WIBM 1370	100	WJNO 1200	100		WLVA 1200 100
Jackson, Mich.		W. Paim Beach,	Fla.		Lynchburg, Va. WLW 700 50000
WIBU 1219 Poynette, Wis.	100	Detroit, Mich.	50000	1	Cincinnati, Ohio
 WIBW 580	1900	WJRD 1200	100		WMAL 630 25
Topeka, Kans. WIBX 1200		Tuscaloosa, Ala. WJSV 1460	10000		Washington, D. C. WMAO 670 5000
Utica, N. Y.	100	Washington, D.			Chicago, Ill.
WICA 940	250	WJTN 1210	100		WMAS 1420 10
Ashtabula, Ohio WICC 500	500	Jamestown, N. Y	100		Springfield, Mass. WMAZ 1180 100
Bridgeport, Conn.		Akron, Ohio			Macon, Ga.
WIL. 1200 St. Louis, Mo.	100	WJZ 760 New York, N. Y	50000		WMBC 1420 10 Detroit, Mich.
WILL 580	1000	WKAQ 1240	1000		WMBD 1440 50
Urbana, Ill.		San Juan, P. R.			Peoria, Ill. WMBG 1210 10
WiLM 1429 Wilmington, Del.	100	WKAR 850 East Lansing, N	1000 lich.		Richmond, Va.
WIND 560	1000	WKAT 1500	100		WMBH 1420 10
Gary, Ind. WINS 1180	1000	Miami Beach, F WK88 1500	la. 100	<u> </u>	Joplin, Mo. WMBI 1080 500
New York, N. Y.	1000	East Dubuque,			Chicago, Ill.
WIOD 1300	1000	WKBH 1380	1000		WMBO 1310 10 Auburn, N. Y.
Miami, Fla. WIP 610	1000	LaCrosse, Wis. WKBN 570	500		WMBQ 1500 10
Philadelphia, Pa.		Youngstown, Oh	io		Brooklyn, N. Y.
WIRE 1400 Indianapolis, Ind.	1000	WKBO 1200 Harrisburg, Pa.	100		WMBR 1370 10 Jacksonville, Fla.
WIS 560	1000	WKBV 1500	100		WMBS 1420 25
Columbia, S. C.		Richmond, Ind.			Uniontown, Pa. WMC 780 100
WISN 1120 Milwaukee, Wis,	250	WKBW 1480 Buffalo, N. Y.	5000		WMC 780 100 Memphis, Tenn.
 WJAC 1310	100	WKBZ 1500	100		WMCA 570 100
Johnstown, Pa. WJAG 1060	1000	Muskegon, Mich WKEU 1500	1. 100		New York, N. Y. WMEX 1500 10
Norfolk, Neb.	1000	Griffin, Ga.	100		Boston, Mass.
WJAR 890	1000	WKOK 1210	100		WMFD 1370 10
Providence, R. I. WJAS 1290	1000	Sunbury, Pa. WKRC 550	1000		Wilmington, N. C. WMFF 1310 10
Pittsburgh, Pa.		Cincinnati, Ohio			Plattsburg, N. Y.
	L				

D.

	WMFG 1210 Hibbing, Minn.	100
	WMFJ 1420	100
	Daytona Beach, Fla WMFN 1210	100
ļ	Grenada, Miss. WMFO 1370	100
L	Decatur, Ala. WMFR 1200	
	High Point, N. C.	100
	WMIN 1370 St. Paul, Minn.	100
	WMMN 890	500
	Fairmont, W. Va. WMPC 1200	100
	Lapeer, Mich. WMSD 1420	100
	Sherfield, Ala.	
	WMT 600 Cedar Rapids, Iowa	1000
	WNAC 1230	1000
		1000
	Norman, Okla. WNAX 570	1000
	Yankton, S. D.	
ж	WNBC 1380 New Britain, Conn.	250
	WNBF 1500 Binghamton, N. Y.	100
	WNBH 1310 New Bedford, Mass.	100
	WNBR 1430	500
	Memphis, Tenn. WNBX 1260	1000
	Springfield, Vt. WNBZ 1290	
	Saranac Lake, N. Y.	100
	WNEL 1290 San Juan, P. R.	1000
	WNEW 1250 New York, N. Y.	1000
	WNLC 1500	100
	New London, Conn. WNNY 1420	100
	Watertown, N. Y.	1000
	Knoxville, Tenn.	
		1000
	New York, N. Y. WOAI 1190 5 San Antonio, Texas	0000
	WOC 1370	100
		5000
	Ames, Iowa WOKO 1430	500
	Albany, N. Y.	
	WOL 1310 Washington, D. C.	100
	WOLS 1200 Florence, S. C.	100
	WOMI 1500 Owensboro, Ky.	100
	WOMT 1210	100
	Manitowoc, Wis, WOOD 1270	500
	Grand Rapids, Mich	

	WOPI 1500 Bristol Tenn.	100
	Bristol, Tenn. WOR 710	50000
	Newark, N. J. WORC 1280	500
-	Worcester, Mass. WORK 1320	1000
	York, Pa. WORL 920	500
-	Boston, Mass. WOSU 570	750
	Columbus Ohio	
	WOV 1130 New York, N. Y.	1000
	WOW 590	1000
	Omaha, Neb. <b>WOWO 1160</b> Fort Wayne, Ind.	10000
	WPAD 1420	. 100
	Paducah, Ky. WPAR 1420	100
	Parkersburg, W. WPAX 1210	Va. 100
	Thomasville, Ga. WPAY 1370	
	Portsmouth, Ohlo	
	WPEN 920 Philadelphia, Pa.	1000
	WPG 1100 Atlantic City, N.	5000
	WPHR 880 Petersburg, Va.	500
	WPRA 1370	100
	Mayaguez, P. R. WPRO 630	500
	Providence, R. I. WPRP 1420	. 100
	Ponce, P. R.	
	WPTF         680           Raleigh, N. C.           WQAM         560	1000
	Miami, Fla.	1000
	WQAN 880 Scranton, Pa.	1000
	Scranton, Pa. WQBC 1360 Vicksburg, Miss.	1000
	WQDM 1390	1000
	St. Albans, Vt. WQXR 1550	1000
	New York, N. Y. WRAK 1370	100
-	Williamsport, Pa. WRAW 1310	100
	Reading, Pa.	
	Philadelphia, Pa.	
	WRBL 1200 Columbus, Ga. WRC 950	100
	WRC 950 Washington, D. C	500
	WRDO 1370	100
	Augusta, Me. WRDW 1500	100
	Augusta, Ga. WREC 600	1000
	Memphis, Tenn. WREN 1220	1000
	Lawrence, Kans.	1000

		_
<u> </u>	WRGA 1500	100
	Rome, Ga. WRJN 1370	100
	Racine, Wis. WROK 1410	500
	Rockford, Ill.	
	WROL 1310 Knoxville, Tenn.	100
	WRR 1280 Dallas, Texas	500
	WRTD 1500	100
	Richmond, Va. WRUF 830	5000
	Gainesville, Fia.	
	Richmond, Va.	5900
	WSAI 1330 Cincinnati, Ohlo	1000
	WSAJ 1310	100
	Grove City, Pa. WSAN 1440	500
	Allentown, Pa.	
	Fall River, Mass.	1000
	WSAU 1370 Wausau, Wis.	100
	WSAY 1210	100
	Rochester, N. Y. WSAZ 1190	1000
	Huntington, W. V WSB 740	a. 50000
	Atlanta, Ga.	
	WSBC 1210 Chicago, Ill.	100
	WSBT 1360 South Bend, Ind.	500
	WSFA 1410	500
	Montgomery, Ala. WSGN 1310	100
	Birmingham, Ala. WSIX 1210	100
	Nashville, Tenn.	
	WSJS 1310 Winston-Salem, N.	100 C.
	WSM 650 Nashville, Tenn.	50000
	WSMB 1320	1000
	New Orleans, La. WSMK 1380	200
	Dayton, Ohio WSNJ 1210	100
	Bridgeton, N. J.	100
	WSOC 1210 Charlotte, N. C.	100
	WSPA 920 Spartanburg, S. C	1000
	WSPD 1340	1000
	Toledo, Ohlo WSPR 1140	500
	Springfield, Mass. WSUI 880	
	Iowa City, Iowa	500
	WSUN 620 St. Petersburg, Fi	100¢ a.
	WSVA 550	500
	Harrisonburg, Va. WSVS 1370	50
	Buffalo, N. Y. WSYB 1500	100
	Rutland, Vt.	

			-	1
	WSYR 570	1000	XEAG 1310 10 Cordoba, Ver.	XEFV 1210 100 Juarez, Chih.
	Syracuse, N. Y. WTAD 900	1000	XEAL 660 1000	XEFW 1310 250
	Quincy, Ill.		Mexico City, D. F.	Tampico, Tams.
· · ·	WTAG 580	1000	XEAM 750 25	XEH 720 250 Monterrey, N. L.
	Worcester, Mass. WTAL 1310	100	Matamoros, Tams.	XEI 1370 125
1 1	Tallahassee, Fla.		Mexicali, B. C.	Morelia, Mich.
		50000	XEAQ 1090 1060	<b>XEJ 1020 1000</b> Juarez, Chih.
	Cleveland, Ohlo WTAQ 1330	1000	Rosarito, L. C. XEAS 1160 50	XEJP 1130 100
	Green Bay, Wis.		Saltillo, Coah.	Mexico City, D. F.
	WTAR 780	500	XEAT 1210 250	XEK 990 100
	Norfolk, Va.	500	Parral, Chih. XEAW 960 50000	Mexico City, D. F. XEKL 1240 500
	WTAW 1120 College Station, Tex		Reynosa, Tams.	Leon, Guan.
	WTAX 1210	100	XEAY 1240 100	XEL 780 1000
	Springfield, Ill.	250	Mexico City, D. F. XEB 1030 10000	Mexico City, D. F. XELA 1240 50
	WTBO 800 Cumberland, Md.	250	Mexico City, D. F.	Saltillo, Coah.
	WTCN 1250	1000	XEBA 1080 20	XELO 1110 50000
	Minneapolis, Minn.	100	Guzman, Jal.	Piedras Negras, Coah. XELZ 1370 100
	WTEL 1310 Philadelphia, Pa.	100	XEBC         730         5000           Agua Caliente, L. C.	Mexico City, D.F.
	WTFI 1450	500	XEBG 820 1000	XEMG 1060100
	Atlanta, Ga.		Tijuana, B. Cfa.	Atzcapotzalco, D. F. XEMO 860 5000
	WTHT 1200 Hartford, Conn.	100	XEBH 930 500 Hermosillo, Sonora	XEMO 860 5000 Tijuana, L. C.
	WTIC 1040	50000	XEBI 1000 25	XEMX 1280 100
	Hartford, Conn.		Aguascalientes, Ags	Mexico City, D. F. XENC 860 50
	WTJS 1310 Jackson, Tenn.	100	XEBJ         1160         20           Merida, Yuc.	XENC 860 50 Mexico City, D. F.
<b>└──</b> ┤	WTMJ 620	1000	XEBK 1000 100	XENT 910 150000
	Milwaukee, Wis.	ļ	Neuvo Laredo, Tams.	Nuevo Laredo, Tams.
	WTMV 1500	100	XEBL 1220 50	XEOK 760 2500 Tijuana, L. C.
	East St. Louis, Ill. WTNJ 1280	500	Mazatlan, Sin.	XEP 1160 500
	Trenton, N. J.		Sabinas, Coah.	Juarez, Chih.
	WTOC 1260	1000	XEBZ 1160 100	XEPN 730 100000 Piedras Negras, Coah.
	Savannah, Ga. WTRC 1310	100	Mexico City, D. F	XERA 840 350000
	Elkhart, Ind.		Tijuana, L. C.	Villa Acuna, Coah.
	WVFW 1400	500	XECW 1310 10	XES 990 250 Tampico, Tams.
	Brooklyn, N. Y. WWAE 1200	100	Mexico City, D. F XECZ 1370 100	XET 690 5000
	Hammond, Ind.		San Luis Potosi, S.L.P.	Monterrey, N. L.
	WWJ 920	5000	XED 1160 2500	XETB 1310 125 Torreon, Coah.
	Detroit, Mich. WWL 850	10000	Guadalajara, Jal. XEDA 1220 200	XETF 1220 30
	New Orleans, La.		Gra. Anaya, D. F.	Veracruz, Ver.
	WWNC 570	1600	XEDP 1080 500	XETH 1210 100
	Asheville, N. C. WWRL 1500	100	Mexico City, D. F. XEDW 1150 20	Puebla, Pue. XEU 1010 250
	Woodside, N. Y.		Minatitian, Ver.	Veracruz, Ver.
	WWSW 1500	100	XEE 1210 50	XEW 890 50000
	Pittsburgh, Pa. WWVA 1160	5000	Durango, Dgo.	Mexico City, D. F XEX 1310 125
	Wheeling, W. Va.	5000	XEF 1450 100 Juarez, Chih.	Monterrey, N. L.
	WXYZ 1240	1000	XEFA 1180 500	XEXB 1270 50
<u> </u>	Detroit, Mich.	100	Tacuba, D. F	Jalapa, Ver. XEXC 810 350
1	W3XJ 1060 College Park, Md.	100	XEFB 870 200 Monterrey, N. L.	Aguascalientes, Ags.
	W8XO 700 5	00000	XEFC 550 100	XEXD 1340 350
	Cincinnati, Ohio	200	Merida, Yuc.	Jalapa, Ver. XEXH 1250 . 250
	XEAA 920 Mexicall, B. C.	200	XEFE 980 25 Laredo, Tams.	San Luis Potosi, S.L.P.
	XEAC 980	250	XEFI 1440 250	XEXS 1000 100
	Tijuana, L. C.		_ Chihuahua, Chih.	Portable in Mexico XEYO 940 500
	XEAD 1060 Guadalajara, Jai.	125	XEFJ 1230 100 Monterrey, N. L.	Mexico City, D. F.
		770	XEFO 940 5000	XEZ 630 500
	XEAF 990	750		Merida, Yuc.

## FOR BETTER RECEPTION

The Perfect Phone Adapter makes it easy to attach headphones to any radio set. Anyone can install it, without tools, in no time at all.

#### **IDEAL FOR THE HARD-OF-HEARING**

Those who are very hard of hearing can enjoy radio reception by using our new HOH Model Adapter. The speaker can be silenced if desired.

> In ordering be sure to give make and model of receiver and a list of the tubes used.

The HOH Model Phone Adapter ..... \$3.95

## ACCESSORIES

6-Foot extension cord with connector	50c
Distant Volume Control, for regulation of volume of set from a distance	\$2.00
Trimm Featherweight Headphones. Precision built, combining ultra-sensitivity with rugged construc-	
tion. Weigh $4\frac{1}{4}$ ounces complete. $24,000$ ohms	\$8.50
Trimm Professional Headphones, the choice of countless users. Professional type. 4000 ohms	\$4.00
<b>Trimm Dependable Headphones,</b> long a favorite with amateur operators. The best in the world for the money. 2000 ohms	\$3.25
Prices on single-unit or special 'phones on reques	t.
We pay the postage on all orders	
If you live in Ohio add 3% for Sales Tax	
THE DANEY DDESS	

# 14717 Detroit Ave., Cleveland, Ohio

## At DEADLINE . . .

Call letters assigned: Lawrence, Mass., 680, WLAW. Toledo, Ohio, 1200, WTOL. Fresno, Calif., 1310, Sioux City, Iowa, 1420, KARM. KTRI. Dubuque, Iowa, 1340, KDTH. Pittsfield, Mass., 1310, WBRK. Salisbury, Md., 1200, WSAL.

WNBR, Memphis, will change its call letters to WMPS.

CXA8, 9505 and CXA14m 15170 kcs., Uruguay, relay the programs of LR3, "Radio Belgrano," Argentina.

ZP14, "Radio Cultura," Villarica, Paraguay, transmits from 11 am to 5 pm on 6312 kcs.

New Danish station heard on 11805 kcs. testing with directional aerials from 6:30 to 8:20 pm EST.

#### QUICK INDEX TO STATION DATA

North American Broadcast

Horth American pro-action
By Frequencies         Sept. '37, p. 63           By Locations         Sept. '37, p. 80           By Calls         Sept. '37, p. 86           Frequency Checks         Sept. '37, p. 99           Names of Owners         Sept. '37, p. 63           Owners' Addresses         Oct. '36, p. 59           Time on the Air         Dec. '36, p. 59
Shortwaves
Broadcasters, with Time on Air Sept. '37, p. 56 North American Police
Foreign Broadcast
By Frequencies         Dec. '36, p. 43           By Locations         Dec. '36, p. 52           By Calls         Dec. '36, p. 57           Australasia         Apr. '37, p. 60           South America         May '37, p. 50           Europe         June '37, p. 49
Long Waves
By Frequencies         Apr. '36, p. 49           By Locations         Apr. '36, p. 51           By Calls         Apr. '36, p. 52
, Miscellaneous
Roster of DX Clubs

1	INSURE YOUR RADIO ENJOYMENT
1	SEND THIS BLANK TODAY The Radex Press 14717 Detroit Ave., Cleveland, Ohio:
ļ	Enclosed find \$ for which send me postpaid my choice of your offers as checked below:
1	Program "slates" $\Box$ 1 for 10c $\Box$ 2 for 15c $\Box$ 4 for 25c
i	🗆 One Radio World Map and Time Converter 25c
1	$\Box$ One copy of the next RADEX
	$\Box$ One year's subscription to RADEX, 10 issues
1	□ Two years
1	Beginner's Story of Radio
1	Print Name Plainly
J	Street and Number
1	City and State



# I WILL TRAIN YOU TO START A SPARE TIME OR FULL TIME RADIO SERVICE BUSI THOUT CAPIT

Do you want to make more money? The world wide use of Radio has made many opportunities for you to have a spare time or full time Radio service business of your own. Three out of every four homes in the United States have Radio sets which regularly require repairs, servicing, new tubes, etc. I will train you at home in your spare time to sell, install, service, all types of Radio setsto start your own Radio business and spare time while learning. Mail coupon build it up on money you make in your shows what I have done for otherswhat I am ready to do for you.

#### Many Make \$5, \$10, \$15 a Week Extra In Spare Time While Learning

Almost every neighborhood needs a good spare time serviceman. The day you enroll I start sending you Extra Money Job Sheets. They show you how to do Radio repair jobs that you can cash in on quickly. Throughout your training I send you plans and ideas that have made good spare time moneyfrom \$200 to \$500 a year-for hundreds of fellows. I send you special equipment which gives you practical Radio experience-shows you how to conduct experiments and build circuits which illustrate important Radio principles.

#### Get Ready Now for Your Own Radio Business and for Jobs Like These

Radio broadcasting stations employ engineers, operators, station managers and pay up to \$5,000 a year. Spare time

Radio set servicing pays as much as \$200 to \$500 a year-full time servicing jobs pay as much as \$30, \$50, \$75 a week. Many Radio Experts own their own full time or part time Radio businesses. Radio manufacturers and jobbers employ testers, inspectors, foremen, engineers, service men, paying up to \$6,000 a vear. Radio operators on ships get good pay, see the world besides. Automobile, police, aviation, commercial Radio, loud speaker systems offer good opportunities. Television promises many good jobs soon. Men I have trained at home hold good jobs in these branches of Radio.

#### Find Out What Radio Offers You

Mail the coupon now for my Free Lesson and my book, "Rich Rewards Lesson and my book, "Rich Rewards in Radio." Both are free to anyone over 16 years old. My book points out Radio's spare time and full time oppor-Radio's spare time and full time oppor-tunities and those coming in Television; tells about my Training in Radio and Television; shows you letters from men I have trained, telling what they are doing and earning; tells about my money back agreement. MAIL THE COUPON in an envelope, or paste it on a penny post card-NOW!

J. E. SMITH, President National Radio Institute, **RICH REWARDS** Dept. 7JO IN RADIO Washington, D.C.

# GOOD FOR BOTH 64 PAGE BOOK

#### L F SMITH President Dent. 710 National Radio Institute, Washington, D. C.

Dear Mr. Smith: Without obligating me, send your sample lesson and the book which tells about spare time and full time Radio opportunities, and how I can train for them at home in spare time. (Please write plainly.)

N	Name
A	ddress
	State

J. E. SMITH, President National Radio Institute Established 1914





#### Earned \$50 First Month in Spare Time

"I knew nothing about Ra-dio. After four lessons I began

servicing Radios, earning \$50 the first month. Last winter I made as high as \$100 a month in spare time."-G. F. WALTON, 808 West Olney Road, Norfolk, Va.

#### **Own Business** Pays \$300 a Month 'I now have my own Radio



business which shows shows three hundred dollars a month profit—thanks again to National Radio." — FRANK T. REESE, 39 N lars to Felton St. Philadelphia, Penna.



#### Get My LESSON on Radio Servicing Tips FREE

Servicing Tips FREE Till prove that my Training is Just what you need to master Radio. My sample lesson text, "Radio Re-ceiver Troubles — Their Giong Bat of Radio Text tiong Bat, and other types of sets, cross-indexed for guick reference. Special section on receiver check-up, alignment, balancing, neutralizing, testing. Get up, alignment, balancing, neutralizing, testing. Get this lesson Free. Mail the Coupon

MAGIC MOVIE AUTOMATICALLY STOPS SIX-CONTINENT PERFECTED ELECTRICTUNING-"SMACK" ON THE STATION DIAL JUST TOUCH BUTTONS 9 TOUCH BUTTONS BRING IN 9 STATIONS - IN A FLASH ND MORE DIAL TWIDDLING-BUTTO ELECTRICALLY AUTOMATIC UST TOUCH LATEST 20-TUBE MIDWEST TUNES ITSELF BY ELECTRIC MOTOR ONLY MIDWEST'S DIRECT-FROM-FACTORY POLICY MAKES THIS AND OTHER SENSATIONAL FEATURES POSSIBLE AT AMAZINGLY LOW PRICES!

> 30 DAYS TRIAL

HERE'S today's radio sensation! No more dial twiddlingmore squinting-no more stooping when you tune a radio! Just touch an electric button (on top of radio) and its corresponding station zips in ... and the dial STOPS ITSELF automatically on the All this happens in 1/3 second with Midwest Perfected station. ELECTRIC Tuning: (1) You touch button-electric motor speeds dial towards corresponding station; (2) Colorida Bul's special across dial and locates itself behind station; (3) As dial flashes to station, it "hunts" back and forth for an

FS

instant—and stops itself and winks at exact center of resonance. Zip... Zip... Zip... you bring in 9 perfectly tuned stations in 3 seconds 1

#### 20 TUBES FOR PRICE OF 10

Why be content with an ordinary 10, 12 or 14-tube set, when you can buy a 20-tube Super DeLuxe ELECTRIC TUNING Midwest for the same money I it will surprise and delight you with its brilliant world wide reception on 6 bands. You brithant world-wide reception on 6 bands. Tou save 50%-and get 30 days free trial in your own home-when you buy direct from the factory at wholesale prices. You are triply protected with Foreign Reception Guarantee. One Year Warranty and Money - Back Guarantees.

#### TERMS AS LOW AS 50 CA WEEK

You have a whole year to pay for your Midwest on the easiest and most convenient credit terms. Never before have you been offered so much radio for so little money and on such casy terms !

#### Send for FREE 40-page Catalog

See for yourself that Midwest offers today ereatest radio values! Write for new 150 Factory-To-You Catalog showing 40 per of radios, chassis and features - in they natural colors. Select the one you like on 30 days FREE TRIAL in your own home.

Jo	SERVICE MENI in nation wide Midwert service ganization.Weitefor free details
----	--



User-Agen's Make Easy Extra Money. Check Here 🗌 for details Check Here for 24-page BATTERY catalog



AZING NEW FEATURES GIVE HUMAN PERFORMAN

The "Magic Mystic Brain" is just one of 101, advanced features, many of them exclusivel It interprets your touch button signals and controls the electric motor. Nine contact fingers can be easily set to any stations you desire. Even a child can do it.

MAGIC MOVIE DIAL Now, you can delight in the world's finest six-continent overseas recep-

tion with a range of 12,000 and more miles (125 to 20,000 KC.) Note that chassis dial shows only broadcast band Then flip 6-wave band switch, and, listantly five additional bands are projected on the dial

MAGIC MYSTIC BRAIN

